AMERICAN

RAILROAD JOURNAL

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

SATURDAY, FEBRUARY 2, 1856.

Second Quarto Series, Vol. XII., No. 5.---Whole No. 1033, Vol. XXIX.

ESTABLISHED IN 1831.

NEW-YORK

PUBLISHED WEEKLY, BY

JOHN H. SCHULTZ & CO.

Front Room, Third Floor,

No. 9 Spruce Street.

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American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, February 2, 1856.

The Pacific Railroad.

The question of a railroad to the Pacific will be one of paramount interest and importance till it is finally set at rest by the construction of a road, or till further examinations shall show its impracticability. In one sense a road is practicable on *any* route, for all difficulties in Engineering resolve themselves into questions of *means*. A road to the Pacific may be possible, but not expedient, weighing the advantages gained with the cost of securing them.

But at any reasonable cost we must have the road. That a practicable route can be found, we have no doubt. The great obstacle in the way of the speedy construction of the road is the fact, that no proper steps have been taken by Government to settle this question of route. It is true that numerous exploring parties have been sent out, but none of these have been constituted in a manner so as to develop any considerable amount of *accurate* information touching the main objects of the expeditions. None of the expeditions have been headed by experienced Railroad Engineers —nor has any one had a distinct branch of service, whose sole *speciality* was the practicability of the road in all its details. A great amount of useful information has been gained without contributing as much as it should to the creation of a correct public opinion upon the general subject. What is particularly needed at the present time, is to have the information obtained, popularized —translated from the official and scientific style of the report into one of common life. The next step should be, to place all the surveys in the hands of a commission composed of our most eminent railroad Engineers to report the results which have thus far been reached, and to take any further action in the measures that may be deemed important. Till the measures indicated are taken, we shall not begin to make any substantial progress.

Public opinion takes no particular direction, because there are no certain guides for it. Almost everybody imagines himself wise upon the subject of the road, because he really knows nothing about it. All assume the conditions necessary to the success of *their* plan. All speak with authority, because the subject has not yet been taken out of the realm of *opinion*.

The first step in the right direction will be to ascertain the cost of constructing and operating a road to the Pacific, compared with such standards as the Western Railroad of Massachusetts, the N. Y. and Erie, and the Baltimore and Ohio. The only questions, then, remaining, will be the expenditure of its construction, and who shall build it.

It is of course useless to speculate upon what would be the result of a properly conducted inquiry of the character named. We hazard the opinion, however, that it would show that roads upon *none* of the routes could be built for *less* than $100,000 per mile. Before any is built, we expect to see the General Government contributing a considerable portion of the capital required.

Marietta and Cincinnati Railroad.

The track of the Marietta and Cincinnati Railroad is now laid to Big Sandy Creek, 14 miles west of the City of Athens, to which point the road will be completed and in operation early in the month of March next. This company are pushing on the construction of their work with remarkable energy.

Labor-saving Tables, for the Use of Civil Engineers.

In February, 1844, we published in the RAILROAD JOURNAL a set of twenty-six Tables for the Calculation of the Cubic Contents of Excavations and Embankments. These tables were prepared by an experienced and well-known Southern Engineer, whose knowledge of the wants of the profession induced him to present his brethren what was felt to be so much needed on all sides.

The manner in which those tables have been appreciated, and the accompanying demonstration of the laws on which the amounts for correction were prepared, is shown in the fact, that nearly the whole extraordinary edition was immediately sold. They should have been published independently in pamphlet form, and would doubtless have been now in common use. Of their value we have experimental knowledge. Although we had prepared tables for ourselves, we rarely found them in the offices of Engineers, and our own had been rather the leavings of labor than the result of any systematic efforts to prepare such. The necessity for them needs not to be demonstrated; the calculation of the prism occurring in earthwork is simple and easy. But the estimate for each section of 100 feet is tiresome drudgery, and is really a waste of time. It will be interesting to Engineers in possession of the back volumes of this Journal to glance over the pages and recall the many spasms of the profession to reduce the labor in this sort of work. It is unintellectual, simple drudgery. Since 1844, no tables suited to general use have come under our notice till of late, those prepared by M. E. Lyons, C. E. of the Lebanon Valley Railroad.

These tables are twenty-four in number, suited to all the Bases and Slopes possible within that limit, and embracing a universal table applicable to all Bases and Slopes and Surfaces. This "universal" table is fortunately free from the objection generally existing against tables with the same object in view, viz:—that their use requires an amount of labor and care quite equal to primary calculations.

They are the most perfect conceivable both as to typography and accuracy. They are printed on sheets that may be had separately by those engaged in estimating where the Slopes and Bases

are settled, or they can be procured bound in one volume, 16x24 inches.

The experiments on colors made by Babbage, previous to publishing his Logarithmic Tables, determined him to use paper of buff tint, as securing greater distinctness for tabular printing. Mr. Lyons has adopted the same hue, and his paper has been made expressly for this purpose.

These tables are endorsed by Richard B. Osborne, Esq., who had used them for years, and who declares that he would not be without them. Mr. Osborne says "*they are a regular labor-saving machine*," and mentions particularly their value to Contractors. We learn, too, from Major Trimble that he most cordially welcomes them as saving a vast amount of the "wearying and monotonous labor of working them out under the old system." Another letter from G. A. Nicolls, of Reading, approves their publication as ensuring *accurate* returns. We hope they may lead to an abolition of the stupid, lazy, and utterly dishonest practice of calculating by simple average of end areas.

Let every Contractor have a set for his own defence.

Engineers ought to come forward at once, and be sure that if the enterprising compiler of all this labor does not make money by the operation, he shall not be subjected to loss. And if every man in the profession were provided, Mr. Lyons would hardly be saved a considerable sacrifice.

Central Ohio Railroad.

A meeting of the creditors and others interested in the affairs of this corporation, was held at Zanesville, on the 23rd ult., W. B. Hubbard Esq., in the chair.

A committee consisting of thirteen individuals, six of these residing out of the State, and one from each county on the line of the road, was appointed; in addition to which another committee of five was instructed to ascertain the amount of stock and indebtedness of the company.

The following is the report presented by the committee of thirteen, subsequently adopted by the meeting:

Resolved, That it be recommended to the Board of Directors, to prepare a series of Fourth Mortgage Bonds in sums not less than $100, nor more than $1000, of a sufficient amount at par, with forty per cent. at par, of preferred stock of the company, to take up and pay all of the outstanding floating debt of the company—such preferred stock shall be entitled to interest at the rate of seven per cent. per annum, to be paid semi-annually in the city of New York, and such interest shall be payable to the exclusion of dividends upon any common stock heretofore, or which may hereafter be issued by the said company, and such preferred stock shall also participate *pro rata* in any dividends over seven per cent. per annum, which said company may declare, with the privilege on the part of the company of redeeming the said preferred stock at par at its pleasure, at any time after three years from the date of its issue. The said Mortgage Bonds, to be payable in New York after 20 years from the first day of Feb'y next, with interest at the rate of seven per cent. per annum, payable semi-annually at the same place, with interest warrants attached, in the usual form, and such Bonds to be made transferrable by delivery at the option of the holder and convertible into stock, each at par, at any time during the running of the Bonds. *Provided*, that any creditor aforesaid shall have the privilege of taking a greater amount of his debt than forty per cent. in preferred stock, if he shall choose so to do. And the Directors are requested to obtain, if found necessary, further legislative enactment, to enable them to carry out the foregoing measure.

Resolved, That the Directors provide a suitable sinking fund of not less than ten per cent. upon the whole issue of the said 4th Mortgage Bonds, wherewith to redeem the same at maturity, and which fund shall from time to time be invested by purchase in the aforesaid Fourth Mortgage Bonds, and in them alone.

Resolved, That those who may, on the 1st day of June next, be the lawful holders of the preferred stock hereinbefore authorized to be issued, be empowered to recommend to the Board of Directors, the names of three or four members of such Board to resign, and to nominate a like number to be appointed by the remaining directors in their places.

At a meeting of the Board of Directors held on the 24th ult. they unanimously approved of the report.

Commerce of Cleveland, Ohio.

At great expense of time and labor, we have been enabled to gather statistics as to the amount and value of articles received and shipped at this point during last year.

For the sake of presenting the whole thing in a nut-shell, we recapitulate from all these tables:

Received by Lake		$81,558,335
"	Railroad	91,066,230
"	Canal, say	16,000,000
Total		$191,624,505
Forwarded by Lake	$77,121,622	
"	Railroad. 84,691,864	
"	Canal, say. 10,000,000	
		$171,813,486
Grand total for 1855		$363,438,051

The increase of trade for 1855 over 1854, is more than $136,000,000—saying nothing about the canal trade—of which increase the lake contributes $65,239,529, and the railroads $71,559,546. Of course a large amount of the property received by lake passes over the railroads, and *vice versa*, so that it enters into the computation twice. Yet it pays its tribute to this place, and shows an amount of business which may well astonish those not familiar with the commerce of the lakes.

Florida Railroad.

We are glad to learn that this important work across the neck of the Isthmus of Florida is making excellent progress. The contractors, among the principal of whom is Gen'l Alexander McRae of Wilmington, N. C., are men of pecuniary ability and of great experience in the matter of railroad construction. General McRae is particularly distinguished for his successful management of the Wilmington and Raleigh railroad, the Presidency of which he assumed when the road was almost completely broken down. Under his management the road was almost entirely reconstructed, and he left it in every respect a first class work. In reference to the progress of the contractors in the Florida railroad, we are allowed to make the following extract from a letter of recent date from the Secretary, to the President of the company.—

"I have just returned here from an examination of the work on the line of our road from here to Lofton, ten miles, and am very much delighted with the progress so far. The work is exceedingly well executed, and is in a greater state of forwardness than I expected. From here to Cashens (about four miles) every thing is complete and ready for the cross-ties. From Cashens, the piling and trestle work crossing the Amelia salt marsh, is completed a distance of fifteen hundred feet, and it is progressing at the rate of over one hundred feet a day. This tressling is admirable, the timbers of the best description, and as firm, apparently, as a rock. On the other side of the Amelia, the road over Pine Island is complete. Then comes another small piece of salt marsh which is subcontracted, but not yet finished. It is, however, in the hands of a very energetic man who does his work rapidly and well. From there to O'Neals creek, about two miles, nearly every thing is finished. At O'Neals creek there is a gap of a few hundred feet, and a small bridge is required. From there about a mile further the road is finished. A large number of the hands are at work on the remaining three miles to Lofton; many of them now engaged on Lofton bank. The bank there is fourteen feet high, (for a distance of half a mile,) but they have nearly finished it, and made some progress on the excavation. It will not be long before this first ten miles is ready for the iron, and a better piece of road I don't think can be found anywhere. You would be very much pleased to go over it. The shanties and other buildings are now erecting along the line of the next section of ten miles."

East Tennessee and Virginia Railroad.

This road, it will be remembered, will form a link in the great chain extending from Washington, D. C., to Memphis, Tenn. By the last Report, made up to the 9th of November, 1855, it appears that the company have suffered considerably from the financial depression of 1854–5. Operations in construction, however, have been steadily persevered in. On the first 50 miles north of Knoxville, the grading and cross-ties are nearly ready for the iron, and 16½ miles of this have recently been opened. The rails are being laid down at the rate of one mile and a-half per week. At this rate, the cars will be able to run as far as Russellville, 50 miles, in a short time. The iron is being forwarded as fast as it can be laid down, and no further delays are expected on that account. On the northern end, about 50 miles are graded, extending from the Virginia State line to Greenville; and on 20 miles of this the cross-ties are laid down. The iron for laying this part of the road is to come by the Virginia and Tennessee line; and, of course, cannot be delivered till the completion of the latter work to that point. Between Russellville and Greeneville is a section of 25 miles six of which are graded, leaving only 19 miles to be done, in order to complete the whole line. All this can be put under contract at any moment, if the funds are forth-coming. A few thousand dollars of loans have been obtained from parties along the line, and it is believed that this can be increased to $20,000 or $30,000. Hopes are also entertained that a like amount can be got from the State, payable in four or five years, with the interest annually. The present crops in that part of the State are abundant, and full confidence is felt in the success of this work.

A difficulty has been felt with the State bonds, which by law cannot be negotiated at less than par. As they have settled below this point for some time, it is suggested that the proper step for the State to take is to raise the rate of interest, which would have the effect of bringing them to a premium at once. The amount of these which have been received to date of report was $669,000, of which $100,000 have lately been remitted for the purchase of rails.

The maximum grade on the road is 68 feet per mile. The shortest curves have radii of six degrees, or 955 feet—similar to those on the Virginia and Tennessee road.

The following is an abstract of the company's—

GENERAL ACCOUNT.	Dr.
Construction, including gradation, masonry, bridging, ties, &c.	$629,817
Iron and equipment, shops and depots.	264,385
Miscellaneous, as engineering, salaries, interest, office expenses, &c.	139,579
Cash, bonds, &c. on hand	321,307
Debts and accounts due	5,457
Balance due for stockholders	203,473
	$1,564,018
	Cr.
Individual subscriptions.	$367,875
County do.	100,000
Floating stock bonds	157,550
State of Tennessee bonds	669,000
Interest, premiums, rents, bills payable, &c.	75,600
Stock bonds	23,375
Debt and accounts due to contractors and other parties	170,618
	$1,564,018

Mineral Point Railroad.

We have received a copy of the exhibit recently put forth by this company. The work was chartered in 1852, with a capital stock not exceeding $2,000,000; but it is proposed to use only about half that sum for the present road. The company have also the right to issue bonds at any rate of interest. The line starts from its junction with the Illinois Central at Warren, 24 miles west of Freeport, where the Galena and Chicago road terminates; and pursues a route nearly due north to Mineral Point, a distance of 32 miles. At Gratiot it forms a connection with the Southern Wisconsin road. There are other works projected, which, when completed, will bring this into connection with the principal lines of Wisconsin and the entire region of the Upper Mississippi.

Warren, its southern terminus, is the most northerly point on the Illinois Central Railroad. The country along the line is remarkably fertile, producing in abundance the ordinary grains, as wheat, corn, oats, &c., besides annually exporting large numbers of live stock. Mineral Point has grown, without any outside influence, to be a place of some two or three thousand population. The county, of which it is the seat of justice, contains over 15,000 inhabitants. It is in the very heart of that great mineral district which has yielded annually, on an average, for the last twelve years, 20,000 tons of lead ore. There is at present setting towards these mines an increasing amount of capital, while numbers of miners who left for California are again returning to their old field of labor. In addition to the lead product, ores of copper, zinc, and mundic are found in abundance.—The only obstacle to the working of copper hitherto has been the want of fuel; but this deficit will at once be supplied, on the completion of the road, when it is estimated, ten thousand tons of coal will pass over it the first year.

There is hardly another mineral district in the world, where the richest soil is found in immediate proximity to inexhaustible deposits of mineral ores; and where at the same time, the construction of railroads is both so easy and indispensable for every purpose.

The estimated surplus of agricultural products to be annually exported, is 80,000 tons. The minerals with lumber, &c., will amount to 60,000 tons additional, making a total of 140,000 tons per annum. This amount at $1.50 per ton, would give a gross annual income for freight of $210,000, to which adding passengers and mail transportation would make a total of $259,000, of which the net gain would not be less than 53 per cent., or $137,000.

The capital of the company is $1,040,000, as follows:

Stock	$420,000
1st mortgage bonds	320,000
2d do	300,000
	$1,040,000

The company have exchanged with Iowa county $150,000 second mortgage bonds; and with two towns seven hundred shares capital stock.

As to the present condition of the work, the right of way has been obtained; the grading and masonry are nearly completed; and the cross-ties are nearly all on the ground. Contracts for superstructure, equipment, buildings, &c., have been made—all payable in the company's securities.—It is expected that the whole work will be completed by the close of this present year.

It should be stated that, in consequence of an agreement to throw all their business on the Illinois Central and the Galena and Chicago roads, the latter companies have *guaranteed* an annual income of $56,000. This sum is to be set aside to pay the interest on the first, and $250,000 of the second mortgage bonds. The county of Iowa provides for the interest on $150,000 by a special tax for that purpose.

Richmond and Danville Railroad.

We gave in a late issue a short notice of this work. Since then, a copy of their last annual report has been received, showing their operations for the year ending 30th September, 1855. The earnings for that period were:

Passengers	$90,419
Freight	216,102
Mails and express	9,788
Total	$316,309
Transportation expenses	171,647
Net gains	$144,662

The road is now open to Barksdales, 127 miles from Richmond, and only 14 miles from Danville. At date of report, the track had been laid to within five miles of the latter point, to which place it will be put down as fast as the weather will permit. The year's business shows an increase of $94,454 over that of the twelve months preceding.

The financial condition of the company is at present quite favorable, and the future is looked forward to with the fullest satisfaction. Since the previous annual meeting, the $220,000 of bonds then on hand have been readily disposed of, at the rates authorized by the meeting. The proceeds enabled the Board, in May last, to purchase 1,000 tons of rails additional, which was done at a cost of $52.50 per ton. Since that date iron has risen in value much more than the amount of the discount lost on selling their bonds. An issue of $150,000 five year mortgage bonds has also been since made and sold at similar rates.

On the bridge over Dan river, at Danville, the masonry is built and the timber framed. It cannot, however, be finished until the road reaches that point.

The ship Harriet Augusta, in 1854, perished at sea, having a cargo of iron on board belonging to the company. Since then, the sum of $9,538 67 has been collected from the underwriters. A competent agent has been employed to secure the remainder as early as possible.

The office of Chief Engineer has been dispensed with, and that of Superintendent created. The total amount of expense for Engineering has been $145,800.

In 1854, the proportion of net earnings to expenses was 40½ per cent. Last year, it was 45¾, and this figure will certainly increase, when the road reaches Danville.

The gross receipts for the months of October and November last, were about $82,000; for the same period in 1854, they amounted to only $49,500—an increase of nearly 70 per cent.

At the previous annual meeting, the amount of stock subscribed, but not paid in, was—from private stockholders, $29,820; and from the State $33,000. During the year $46,000 of this have been collected; leaving due only $10,000 from individuals and $15,000 from the State. Part of this will doubtless be collected.

The capital stock is now $2,000,000; cost of road and equipment, about $3,200,000; debt $1,200,000. Of the last $600,000 are due the State, being made redeemable by the application of one per cent per annum, for 34 years, when it will be extinguished. Two hundred thousand dollars are in bonds guaranteed by the State, and mature in 25 years from their issue; $250,000 not guaranteed, fall due in 1859; and $150,000, in 1860. The annual interest charge, including redemption fund, on all these is $78,000. It is proposed to apply the net earnings to the redemption of the 1859 and 1860 bonds henceforth.

The following synopsis, from the Treasurer's report, shows the receipts from all sources, from the date of organization to Sept. 30th, 1855.

From Individual stockholders		$478,248
" Counties and corporations.		310,000
" Commonwealth of Virginia		1,181,200
" State loan and bonds issued.		1,086,647
" Miscellaneous sources		33,066
" Transportation department		803,304
Total of receipts		$3,892,466
The expenditures for the same period, for construction of the road, buildings, land damages, real estate, machinery and furniture of the road is	$3,259,597	
Interest and redemption fund	129,132	
Expenses charged the transportation department.	536,200	
Total expenditures	$3,924,930	
Debts due by the company	$124,481	
Debts due to the company and funds	92,017	
		32,463
		$3,924,930

Of the entire capital stock three-fifths, or $1,200,000, are held by the State, less the amount not yet paid in. The receipts from all sources, for last fiscal year, were $722,470; and the entire expenditures for the same period, $678,883. The total gross earnings of the road from the opening of the first section, in January, 1851, to date, have

been $804,409; and the net profits $292,359. It will be seen that the net receipts for last fiscal year have been nearly as great as those of the other three years together.

The average distance operated in 1855, was 100 miles.

The rolling stock consists of 18 locomotives, 11 passenger, 3 baggage, and 271 freight cars of various kinds. The rolling stock is said to be in good order.

At the annual meeting a resolution was adopted to apply for an increase of $2,000,000 to the company's authorized capital stock, on the three-fifths subscription principle by the State; for the purpose of extending the line in a westerly direction to some point on the Virginia and Tennessee Railroad.

The officers for the present year are—V. Witcher, President; P. Van Deursen, Secretary and Treasurer; R. P. Atkinson, Construction Engineer; and Chas. Campbell, Superintendent. The directors on behalf of the State are—J. B. Stoval, L. E. Harvie, and B. M. Jones; and on the part of the other stockholders—J. Brown Jr., and R. O. Haskins. Last annual meeting held December 12, 1855.

Journal of Railroad Law.

ASSESSMENTS OF DAMAGES.—THEIR ESTIMATION.

By statute law in most, if not all of the States, it is provided that railroad companies may take private lands for the purposes of their railroad; and if the owner and the company cannot agree upon the amount of damages, they are to be assessed by commissioners.

In determining the amount of damage, questions of considerable interest and importance have arisen, and particularly in determining how far the incidental advantages to the owners of land are to be taken into consideration. If the land taken be part of a farm, for instance, and it is used by the company for a depot, stationed at the terminns of a flourishing road, in consequence; the rest of the land rises from farm prices to city prices; doubling, tripling, or even quadrupling in value, are the company to pay the full value of the land which they take, and obtain no advantages from this increased value which they give to the land? They may make the fortune of the man whose lands they take; are they yet to be compelled to pay him damages?

In the Philadelphia and Reading Railroad Company *vs.* Gilson, 8 Watts R., 243, it appeared that Mr. Gilson, whose lands had been taken, owned a large hotel in Reading, (where the lands were situated) that the custom of the hotel had been increased, and the establishment rendered more valuable by the railroad. The hotel, however, did not stand upon the land which had been injured by the road. The court held, that the advantage accruing to Mr. Gilson through the hotel, could not be set off by the plaintiff against the injury done to him through other and different lands.

The Supreme Court of Massachusetts decided in the case of Meacham *vs.* The Fitchburg Railroad Company, 4 Cushing, 291, S. C. 1 Am. Rail. Cas. 584, that in the estimate of the damages to which a party is entitled for the location of a road over his land, allowance is to be made for any direct and peculiar benefit which he receives from the construction of the road, not shared in common with other landholders in the vicinity, but none for the general benefit which the owner may receive from the enhanced value of land in his vicinity, in consequence of the facilities afforded by the road. See also Upton *vs.* The South Reading Branch Railroad Company, 8 Cushing, 600.

In New York it is provided that commissioners "in determining the amount of compensation, shall not make an allowance or deduction on account of any real or supposed benefits which the parties may derive from the proposed railroad." Rev. Stat. N. Y. 4th Ed. 1,227. It was, however, decided in the case of the Troy and Boston Railroad Company *vs.* Lee, 12 Barbour, 169, that "in making appraisal of this kind, the true rule, the only rule which will do justice, is to determine what will be the effect of the proposed change upon the market value of the property. The proper inquiry is, what is it now fairly worth in the market, and what will it be worth, after the improvement is made?

In the latter case of the Albany Northern Railroad Company *vs.* Lansing, 16 Barbour, 69, the Court seems to have adopted a different rule, more in accordance with the statute. The Commissioners making the appraisment in that case, stated the rule by which they should be guided to be, that they should allow "full compensation for the land taken, including therein the damages to the adjacent land by reason of such taking, but they should not allow compensation for prospective damages." The Court sustained this rule. "The obvious intention of the legislature was," say the Court, "to confine the Commissioners to an estimate of the price to be paid by the railroad company to the owner upon this involuntary sale of his land, regardless of the benefits or injuries which might result to him in consequence of the contemplated improvement."

"They certainly," say the Court, "were not required to confine themselves to the actual, abstract value of the land to be taken, as though the owner would have no other lands left to be affected by it. Had they done this, their award would have been less than $100, for it was admitted upon the hearing that the average value of Mr. Lansing's land was $175 per acre. They were to consider how *the taking* of the land, but not *the use* of it, in any particular mode, would affect the residue of the owner's land. Would it leave that residue in an inconvenient, unmarketable shape? If so, this fact might properly be taken into the account in determining the amount of compensation. Thus, if the land to be taken should lie between the owner's house and the highway, the amount of compensation should be vastly more than for the same quantity of land equally valuable in itself, but situated in some part of the owner's premises. The commissioners, therefore, were right when they decided that they would include in the compensation for the land to be taken, "damages to the adjacent land by reason of *such taking*." But the fact that the land to be taken would be used for a railroad, rather than any other lawful business, formed no part of the materials out of which the award was to be made. Whether the land taken was to be used for a *railroad* or a *garden*, was a question, so far as compensation was concerned, with which the commissioners had nothing to do. Their duty was to award compensation for the *taking* of the land, not for the *use* to which it should be applied when taken. Nothing could be more unjust in principle, than to prohibit the commissioners from considering the *benefits* which the owner of the land would derive from the construction of the road, and yet require them to consider what inconveniences or injuries might be the result of such construction."

From these authorities it would seem that in assessing damages for the taking of lands, the commissioners are to give the railroad company the benefit of any enhanced value their railroad may give to the land from which they take; but they are not to consider either such general incidental advantages as the landowner may enjoy in common with the rest of the community, nor such injuries from the use to which the land taken is put, but only those which result directly from the taking of the land itself.

Railroads in Mississippi.

We give below an extract from the late message of the Governor of Mississippi in reference to the railroads of that State. It gives a very clear idea of the system which will supply to the State all needed railway accommodations. The State has already done much for the encouragement of her leading lines. The Gov'r very properly, we think, advises the extending of further aid, and there can be no doubt that the railroads now in progress will prove remunerative investments, while they will become of incalculable benefit to the people of the State. In none of the new States have the people taken hold of railroad enterprizes with more energy and vigor than in Mississippi, and there is no State in which they promise a better result.

The following are the extracts referred to:—

The act of February 4th, 1854, granted to the Southern Railroad Company an extension to the 8th day of March, 1858, to complete the road to the Alabama line, and in accordance with the requirements of this act, the sureties on the bond of the company, given to the State, to build five miles of the road east of Brandon, by the 1st of January, 1854, and ten miles more by the 1st of June, 1854, filed their agreement in writing with the Secretary of State, that this act of extension should not impair or in any manner effect their liability on said bond. The work on the road has not progressed with the expectations of the company, and whether they have a prospect of completing it to the Alabama line, by the time specified, I am not advised. A report will doubtless be made by them to the present session of the Legislature.

Under the act of 2d March, 1854, to aid in the construction of the New Orleans, Jackson, and Great Northern railroad, in the State of Mississippi, and for other purposes, I appointed Powhattan Robinson, Engineer, to survey and locate the line of the Gulf and Ship Island railroad, and to make out the proper profiles, maps, &c., and an estimate of the cost of building said road. The work was well executed, and for full information on this subject, I refer you to the report of the Engineer, with my letter of appointment and instructions to him, and his splendidly executed map, showing the line and profile of the road. Five thousand dollars were paid to Mr. Robinson, on my requisition for this work. All that the law allowed.

Under the same act, which reserved in the Treasury a sum not to exceed one hundred thousand dollars, when collected subject to the requisition of the Governor, in favor of the Mobile and Ohio Railroad company, in accordance with the provisions of the act of 16th March, 1852, on the report of S. B. Parker, appointed agent of the State, by me, under said last act, to examine ten miles of said road, made ready for the iron rails,

in this State, and in continuation of that portion of the road in running operation in the State of Alabama, and on the delivery to me by the President and Directors of said company, of certificates of stock in said company, for the sum of one hundred thousand dollars, that sum was paid, on my requisition, to said company, for which the certificates of stock were deposited by me in the Treasury. Copies of the report of the agent, and of my letter of appointment and instructions to him, are herewith submitted.

Under the same act, there has been paid to the New Orleans, Jackson, and Great Northern Railroad Company, the sum of one hundred and forty-three thousand dollars. And to the Mississippi Central Railroad Company the sum of sixty-two thousand five hundred. For which sums, severally, these companies have deposited certificates of stock for the State in the Treasury.

Some differences of opinion existed between these three companies as to their rights under this act, and some delays were caused in making to them the several payments. But these differences were amicably adjusted by mutual agreement between them, and the balance of the proceeds of the Internal Improvement lands, as it is realized, now goes to the New Orleans, Jackson, and Great Northern, and Mississippi Central roads, in the proportions specified in the act.

The Mobile and Ohio railroad is now completed to the Lauderdale Springs station, near the north boundary of Lauderdale county, a distance of one hundred and fifty-three miles from Mobile, and the cars are running successfully to that point. The iron rails, before the last of December, were laid down seven miles north of the above station, beyond the line of the southern boundary of Kemper county, and are gradually being extended, as fast as the ability of the company will admit. The business and travel of the road surpass expectation, and the limited available means of the company, exhausted always by their continued effort for the extension of the track, scarcely enables them to furnish it with machinery and rolling stock sufficient for the demands of the every day increasing transportation. The advantages to the country through which the road passes, and which it is reaching, heretofore remote from market, and destitute of facilities, have neither been calculated nor anticipated. Reality now presents them with astonishment even to those who in anticipation supposed they had most fully realized them. The road-bed is mostly completed and in readiness for the iron rails to the Tennessee line, and in fact mainly so to the northern terminus, near the mouth of the Ohio river. This road is under a good direction. It stands upon a firm basis, and will go through; but it requires aid to give it that progress which the value of time and the great interests of the country now demand.

The New Orleans, Jackson and Great Northern Railroad is completed, and in successful running operation to Osyka, on our State Line a distance of eighty-eight miles from New Orleans. It reached this point, to which it has been brought, almost exclusively, if not entirely, by means furnished by the State and citizens of Louisiana, and city of New Orleans, about the 4th of July, 1854. Since that time the iron rails have been laid six miles north of Osyka. Upon this portion of the line the cars are running, but it is not open yet for general trade. The grading of the road is completed to Brookhaven, in Lawrence county, a distance of thirty-eight miles from Osyka. The means of the company have not been available to purchase the iron for this part of the road. The distance from Osyka to Jackson by the line of the road, is ninety-five miles (air line 91¾ miles.) If the iron rails were laid to Brookhaven, it would be in running operation within fifty-seven miles of the capital. Fifteen miles of the road is completed, and in running operation from Jackson north towards Canton, and the whole line will be completed to Canton by the middle or last of February next. The road is graded twenty miles or more in Monroe county, north and south of Aberdeen, but the company has not been able to reach that section with iron rails.

This road forms one of the most important lines throughout our State, and in its connections with other roads, one of the most important lines in the United States. Its means are sufficient, if they were available, to construct portions of it, if not the whole line, gradually, but slowly. It requires additional aid to give to it that progress which it merits, and which the great interests and necessities of the country so imperiously demand.

Twenty-four miles of the Mississippi Central railroad are completed, and now in running operation from the Memphis and Charleston road to Holly Springs. The business upon it equals and exceeds the expectations of the company. One hundred and twenty miles of additional road bed from Holly Springs south, and Canton north, together, will be in readiness for the iron rails by July next—a considerable portion of this distance being now in readiness for the cross-ties. But thirty miles of the earth-work on the whole line are not let to contract. A recent purchase of iron rails has been made by the company, sufficient to lay down fifty miles, commencing at Canton and Holly Springs by the first day of April next. And had the company the necessary means vigorously to prosecute the work, the whole line could be put in operation within two years from this time. The success of this road has been remarkable. While the Mobile and Ohio, incorporated in 1848, and the New Orleans, Jackson, and Great Northern in 1850 and '52, have their commencement at important commercial cities, and look to their northern termini as forming connections with great through lines of travel, the points of terminus which they connect being always regarded as essential to the success of railroad enterprises, this road receiving its charter in 1852, and connecting by its points of terminus simply with these other roads, with the one at Canton, and the other at Jackson, in Tennessee, passing through a country supposed to be unfavorable for a railroad line, and looking apparently to local support, has in its progress and prospects kept pace with, if not surpassed either of the others—promises to keep up with the swiftest to completion, and is destined, besides the immense local traffic which awaits it, to become an important link in the great line upon which the ever swelling volume of commerce and travel is to find its way from the valley of the West to the shores of the Gulf. The company has received from all sources about $820,000—has expended for construction, equipment, &c., about $940,000 including what has been expended on the work, the available means of the company is about $2,000,000, and the estimated cost of the road, with partial equipments, is $3,000,000. Hence it will be seen that but $1,000,000 additional is required to complete the work.—This amount, if now rendered certain, as the line progresses, would ensure the completion of the entire road by the first day of January, 1858.

I will not speak to the Legislature of the incalculable value of these roads to the State when completed. If all do not see and feel it, no suggestions of mine could make it manifest. The time has passed when the value of well directed railroad improvements is to be calculated. Axioms are propositions admitted. So is the value of railroad improvements. These roads when completed, will form together a continuous line of eight hundred miles within the limits of our State. In connection with others now in progress, and others still which will necessarily grow up as arms or branches of these, they will soon make to our people for all the purposes of commerce and travel, distance a point and time but a moment. The brilliant prosperity which they will give to our State the most sanguine has not conceived, and wonder herself will be astonished of the magnificent results. In their connection with other lines they will place us in the same communication throughout the United States, and the bell which tolls the departure of the iron horse from the Lakes on the North will scarcely have its echoes returned from the waters of the Gulf, before his neigh will be heard upon its tranquil shores. The despatch which announces his departure from the Empire City of the North, borne by the genius of Franklin, transmitted to Morse, with lightning rapidity along the wire line, will but have heralded his coming upon his iron way, in time for the man of commerce, in the Crescent City of the South to take care of his freighted train. And all this will pass through our State.

I would not recommend to the Legislature any thing that would embarrass the State or burden the people. But these railroads I think should have our aid. They linger wistfully for completion, but slowly without our help. The high-mettled steed is upon the track, and only waits for the hand of the State to turn him upon the open line, with a loosened bit. The burdens of our State Government are not now onerous, and the advantages of these works, if not now seen, when completed, will be so felt by the people as to be appreciated.

The State has already over three hundred thousand dollars invested in stock in these roads, and when the proceeds of the sale of the Internal Improvement Lands are realized, will have over half a million. This fund, however, has been derived from the General Government, and the State herself has done nothing for the roads.

I, therefore, recommend to the Legislature to consider the propriety of so increasing the revenue as to raise a surplus in the Treasury of two hundred thousand dollars to be invested in stock, by cash payments annually, to these several companies, in proportion to the extent of their lines within the limits of the State, to be applied to the purchase of or payment for iron rails when the road beds are in readiness for the iron superstructure. And that all monies loaned at interest to these companies, or invested in their roads or stock in the State be exempted from taxation until the several roads are completed. This will be a small sum for the State to raise, and a small sum for each of the companies to receive. But it will be a cash sum to them, and inspire confidence in their success by the encouragement given them by the State. And large amounts of private capital, it is believed, now driven from the State, to be loaned elsewhere, when exempted from taxation, and inspired with confidence by the State aid to these roads, will seek investment in their bonds and stocks, and furnish them with ample means to progress rapidly to completion. This last suggestion will be objected to by some, as a special privilege. The Constitution authorizes the grant of special privileges, in consideration of great public benefits conferred. Incidental advantages in this case will result to those who make the loans, bus the object is to benefit those works of great utility to the State. This principle has already been recognized in reference to these companies, by similar exemptions in their charters.

That this appropriation shall be continued for five years, and when the Mobile and Ohio railroad is completed, the amount proportioned to it shall then be invested in stock in the Southern railroad—the amount to the Contral when completed, in the Mississippi and Tennessee railroad, and the amount to the New Orleans, Jackson, and Great Northern railroad, when completed, in the Gulf and Ship Island railroad, all as first provided. This in two or three years will complete the three first roads—in three to six years the three last, and the State will have invested in them a paying stock of more than one million and a-half of dollars, yielding a dividend to be appropriated to any other objects of internal improvement she may desire, or then to the great purpose of education, or if to none of these, then sufficient to pay the expenses of her government, without taxation. Should these suggestions meet with the approval of the Legislature, it will be for their wisdom so to arrange the Revenue Law as to produce the desired result. It is believed the restoration in part of the Revenue Act of 1846, with some additions to the present law, will accomplish the object.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of $100.

NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.
Atlantic & St. Lawrence	149	1,538,100	2,973,700	6,019,929	470,647	--------	6	68
Androscog. & Kennebec	55	642,343	1,473,080	2,245,020	190,605	90,797	none	18
And.oscoggin	20	91,192	232,193	343,317	29,396	12,807	none	20
Kennebec & Portland	72	1,211,398	1,607,229	2,470,593	228,747	114,642	none	14
Portl., Saco, & Portsm'th	51	1,367,000	119,237	1,486,327	259,330	124,038	6	88
Boston, Conc. & M'ntreal	93	1,808,093	1,059,512	2,771,310	233,234	120,834	----	----
Cheshire	53	2,083,825	946,919	3,181,997	372,892	131,015	none	18
Concord	35	1,485,000	none	1,412,576	329,744	158,632	8	83
Northern, N. H.	82	2,768,400	none	3,016,633	370,529	138,299	2½	39¼
Conn't & Passumpa. Riv.	61	1,048,145	787,608	1,780,062	162,687	55,173	none	----
Rutland & Burlington	120	2,233,376	2,662,396	5,378,428	394,971	--------	none	----
Vermont Central	117	5,000,000	3,550,236	8,463,366	820,119	214,793	none	----
Boston and Lowell	27	1,830,000	325,635	2,188,595	489,754	140,377	6	65
Boston and Maine	83	4,076,974	150,000	4,179,535	906,790	421,561	8	79
Berkshire	21	600,000	none	600,000	--------	42,000	7	----
Boston and N.Y. Central	74	2,234,600	1,200,000	3,310,948	102,352	42,335	none	2½
Boston and Providence	55	3,160,000	350,705	3,611,821	558,671	201,078	none	65
Boston and Worcester	68	4,500,000	587,553	4,856,370	952,894	342,139	6½	84
Connecticut River	52	1,591,110	254,043	1,802,244	277,770	102,942	4½	50
Eastern, Mass.	60	2,583,400	2,850,325	4,447,459	730,269	346,425	7	44¾
Essex	20	299,107	469,311	747,008	51,246	none	none	----
Fitchburg	67	3,540,000	334,992	3,730,965	704,638	272,716	6	72
Fitchb'g and Worcester	14	238,140	74,099	333,884	42,647	19,274	6	----
Lowell and Lawrence	12	200,000	140,000	363,658	56,135	23,823	6	----
Nashua and Lowell	14	600,000	16,000	654,603	191,887	55,877	8	83
N. Bedford and Taunton	21	500,000	none	533,953	198,491	56,533	6½	----
Newburyport	14	137,260	154,554	287,413	32,677	4,666	none	----
Old Col'y and Fall River	87	3,015,100	314,834	3,434,164	649,656	142,800	6	82
Pittsfield & N'th Adams	18	450,000	none	443,677	50,895	25,519	6	----
Vermont and Mass.	77	2,232,540	1,046,626	3,207,867	275,523	56,383	none	9
Western, Mass.	155	5,150,000	5,689,520	9,953,258	1,763,944	718,703	7	87½
Worcester and Nashua	46	1,141,000	218,244	1,394,703	209,118	82,959	2¼	43
Prov'nce and Worcester	43	1,522,200	351,500	1,843,332	316,616	131,312	7	65
Hartford and N. Haven	72	2,359,000	939,000	3,313,932	730,012	352,799	10	122¾
Hart'd, Prov. and Fishkill	123	1,845,610	2,090,124	4,060,869	258,685	119,611	none	----
Housatonic	110	2,000,000	474,177	2,429,066	330,792	18,351	none	----
Naugatuck	57	1,031,800	573,995	1,577,167	238,266	none	4	----
N. York and N. Haven	62	2,992,000	2,252,647	4,980,407	906,018	335,611	none	30
N. Haven and N. London	50	738,258	735,165	1,450,318	103,986	217	none	----
N. London, W. & Palmer	66	508,600	1,007,826	1,843,332	316,616	131,312	none	----
Norwich and Worcester	66	2,122,300	796,886	2,596,488	304,651	95,456	6	25
Buffalo, Corn. and N. Y.	100	1,482,766	1,402,244	2,597,963	123,147	50,752	none	----
Buffalo and N. Y. City	92	798,439	2,587,849	3,401,868	254,770	52,030	none	----
Buffalo and St. Line	81	1,300,000	1,030,000	2 343,849	507,618	264,855	10	----
Cayuga & Susquehanna	35	687,000	531,318	1,093,624	120,849	58,589	none	----
Hudson River	144	3,757,891	8,933,804	12,391,363	1,753,986	603,010	none	28¾
Long Island	86	1,875,148	626,958	2,518,261	279,520	102,657	none	26
New York Central	534	24,154,860	14,462,742	28,523,913	6,563,581	3,162,126	8	92
New York and Erie	464	10,023,958	25,126,669	33,439,431	5,488,993	2,627,118	none	51⅝
New York and Harlem	133	5,716,050	3,527,595	8,127,388	942,394	154,854	none	17
Northern, N. Y.	119	1,611,527	4,522,413	5,435,565	518,527	145,733	none	----
Oswego and Syracuse	37	374,920	219,594	677,754	106,764	53,380	none	----
Rensselaer & Saratoga	25	610,000	140,000	888,182	231,348	76,327	5	----
Saratoga and Washing'n	54	899,900	1,053,234	1,891,993	183,959	37,666	none	----
Syracuse & Bingham'n	71	731,614	1,118,751	1,636,117	Recently	opened.	none	----
Troy and Boston	27	439,492	493,500	1,107,873	152,648	66,407	none	----
Watertown and Rome	97	1,370,428	854,768	2,040,543	393,954	152,752	5	65
Belvidere and Delaware	50	1,000,000	1,177,376	2,177,376	124,301	44,825	none	----
Camden and Amboy	94	1,500,000	--------	4,763,184	1,682,486	552,456	12	----
Camden and Atlantic	60	240,125	1,269,223	1,499,185	69,673	61,760	none	----
New Jersey	31	3,253 925	798,596	4,306,338	824,032	440,447	10	120
New Jersey Central	75	2,000,000	1,632,085	3,506,226	378.145	180,796	7	----
Morris and Essex	62	1,155,715	351,500	1,549,622	233,596	99,377	6	----
Cumberland Valley	56	1,184,500	28,411	1,212,911	--------	--------	----	----
Del. Lack. & Western	109	2,855,175	1,865,897	4,140,365	In progr.	--------	----	----
Erie and North East	20	600,000	150,000	750,000	--------	--------	10	----
Harrisb'g & Lancaster	38	--------	--------	--------	--------	--------	----	----
Little Schuylkill	28	--------	--------	--------	--------	--------	----	----
Northern Penn.	19	2 530,855	731,492	3,287,678	--------	--------	----	----
Pennsylvania	256	12,104,820	6,965,884	17,158,495	3,499,192	1,977,533	----	87½
Phil. and Reading	96	11,030,309	7,438,800	19,004,180	4,321,793	2,593,915	10	84¼
Phil. Wil. and Baltimore	98	5,000,000	3,069,723	7,452,062	1,006,638	353,573	3	41
Phil. Germ. & Norrist'n	38	899 350	376.800	1,274,150	206,981	113,443	9	----
Pittsb. and Connellsville	147	1,339,661	111,493	1,369,630	In progr.	--------	----	----
Sunbury and Erie	269	2,093,740	262,886	2,075,650	In progr.	--------	----	----
Delaware	70	--------	--------	--------	In progr.	--------	----	----
Baltimore and Ohio	382	13,118,902	10,809,659	22 218,849	3,711,453	1,601,090	none	52¾
Washington Branch	41	1,655,000	25,000	1,650,000	369,229	124,981	6	----
Northern Central, Md.	84	--------	2,630,000	5,544,733	In progr.	--------	----	----
Manasses Gap	165	2,300,000	--------	In progr.	--------	--------	----	----
Orange and Alexandria	97	1,457,500	638,622	2,754,047	211,505	111,363	----	----
South Side	123	1,371,700	1,489,012	2,739,362	123,466	59,710	none	----
Pittsb'g & Steubenville	32	1,221,277	280,000	914,695	In progr.	--------	----	----
Virginia Central	138	2,800,666	1,051,248	4.184,516	379,366	172,391	none	----
Virginia and Tennessee	149	2,500,000	2,969,780	5,469,780	525,920	126,329	----	----
Richmond and Danville	127	2,000,000	1,200,000	3,200,000	316,309	144,662	----	----
Richmond & Petersb'g	22	685,600	272,086	1,060 495	139,438	47,003	none	----
Rich'd, Fred. & Potom'c	130	1,000,000	730,506	1,708,169	232,172	120,212	7	----
Wilmington and Weldon	162	--------	--------	--------	--------	--------	----	----
Wilm'ton & Manchester	171	1,070.775	1,373,989	2,330,877	339,800	151,064	none	----
Raleigh and Gaston	97	973,300	120,573	1,135,451	173,923	103,392	2½	----
Blue Ridge	---	679,275	345,929	956,610	In progr.	--------	----	----
Charlotte and S. Carol.	109	1,201.000	380,000	1,670,908	243,037	98,277	2¼	----
Greenville & Columbia	165	1,293,464	968,800	1,999,080	214,865	206,774	----	----
South Carolina	203	4.188.020	2,731,545	7,133,848	1,363,008	788,862	9	----
Atlanta and La Grange	87	719,842	225,000	1,092,222	251,076	161,193	7½	----
Georgia	211	4,156,000	260,991	4,416,99	906,694	532,110	8	----
Georgia Central	191	3,833,140	none	3,833,140	1,280,570	645,774	9	----
Macon and Western	102	1,230 560	167,712	1,647,045	350,802	96,104	10	95
Montgom'ry & W. Point	116	1,274,600	654,816	1,929,416	249,128	113,824	8	----
South Western, Ga.	92	1,097,496	465,500	1,624,925	253,806	141,168	8	----
Tennessee and Alabama	30	246,486	--------	679,906	In progr.	--------	----	----
Memphis and Charlest'n	288	2,103,177	958,275	3,563,362	176,484	102,016	----	----
Mobile and Ohio	527	2,300,000	1,310,666	3,666,991	In progr.	--------	----	----
Miss. Central	188	642,534	none	628,303	In progr.	--------	----	----
N.O., Jackson, and G. N.	100	--------	--------	--------	In progr.	--------	----	----
N.O., Opelousas & G.W.	350	1,309,428	476,143	1,825,812	In progr.	--------	----	----
Vicksb., Shrevep. & Tex.	---	111,750	none	107,895	In progr.	--------	----	----
East Tennessee and Ga.	111	1,000,000	1,500,000	2,500,000	In progr.	--------	----	----
East Tennessee and Va.	16	625,425	938,593	1,033,781	In progr.	--------	----	----
Nash. and Chattanooga	151	2,319,330	1,497,081	3,843,694	316,090	112,177	none	----
Covington & Lexington	93	--------	--------	--------	264,973	--------	----	20½
Lexington and Frankfort	29	431,091	159,299	635,363	90,930	34,864	----	----
Lexington & Big Sandy	---	--------	--------	428,057	In progr.	--------	----	----
Lexington and Danville	---	540,117	61,525	570,463	In progr.	--------	----	----
Louisville and Frankfort	65	698,236	669,061	1,589,566	244,014	96,902	6	----
Atlantic & Gt. Western	254	866,939	77,294	613,231	In progr.	--------	----	----
Bellefontaine and Ind.	118	1,881,598	1,260,612	2,805,821	238,010	114,592	none	----
Cleveland and Erie	95	--------	--------	--------	--------	--------	----	----
Clev., Col., and Cincin.	141	4,473,721	374,127	4,546,133	1,162,601	557,905	9	98
Clev., Zanesv., and Cincin.	87	--------	--------	--------	--------	--------	----	----
Cleveland and Toledo	200	2,675,425	2,689,301	5,124,629	736,272	396,986	10	72
Clev. and Mahoning	103	--------	--------	628,533	In progr.	--------	----	----
Clev. and Pittsburg	133	2,686,770	2,516,162	4,818,153	450,215	255,868	----	62
Cin., Hamilt'n & Dayton	60	2,100,000	1,464,364	2,961,978	483,620	--------	----	63
Cin., Wilm. & Zanesv'e	131	1,120,450	1,131,265	2,326,459	In progr.	--------	----	20
Col. and Xenia	55	1,484,550	149,000	1,481,733	356,366	187,518	10	----
Columbus and Xenia	54	1,418,350	311,032	1,440,447	340,781	168,949	----	82½
Dayton, Xen., & Belpre	63	437,838	422,658	860,496	In progr.	--------	----	----
Dayton and Michigan	140	1,076,692	393,011	1,185,826	In progr.	--------	----	----
Eaton and Hamilton	42	448,411	835,994	1,345,573	113,859	53,256	----	30
Little Miami	65	2,963,921	1,171,785	3,648,172	681,562	336,708	----	90
Mad River and L. Erie	205	2,451,650	2,572,932	4,446,661	--------	--------	----	22
Central Ohio	138	1,520,927	3,485,076	4,283,443	Recently	opened.	none	20
Ohio and Penn.	187	2,451,700	3,219,000	5,670,700	1,111,626	662,117	9	----
Pittsb'g, Maysv'e & Cin.	50	--------	--------	343,882	In progr.	--------	----	----
Sand'y, Mansf. & New'k	127	1,350,000	2,206,357	3,552.357	328,958	164,479	none	----
Scioto & Hocking Valley	135	403,975	509,050	888,858	In progr.	--------	----	----
Springf., Mt. Vernon & P.	113	1,000,000	950,000	--------	In progr.	--------	----	----
Tol., Wabash & St. Louis	242	2,500,000	4,530,000	--------	In progr.	--------	----	----
Cin., Log, and Chicago	255	4,196,679	1,006,125	2,080,433	In progr.	--------	----	10
Evansv'e & Crawfordsv.	109	706,945	1,177,596	1,844,541	127,400	64,552	----	----
Ind. and Cincinnati	88	1,213,723	1,442,859	2,178,461	356,012	193,142	7	61
Indiana Central	66	608,829	1,251,387	1,669,090	321,400	186,224	----	45
Ind., Clev. & Pittsburg	83	834,157	1,101,971	1,671,544	--------	--------	none	20
Jeffersonville	66	1,014,252	694,000	--------	206,544	94,318	none	----
Lafayette and Indianapolis	64	--------	--------	--------	--------	--------	----	----
Madison and Indianapolis	87	1 647,500	1,589.881	3,237,381	--------	--------	none	----
New Albany and Salem	288	2,535,121	5,281,848	6,643,189	645,827	371,402	none	10
Peru and Indianapolis	73	--------	858.314	--------	150,000	90,000	none	15
Terre Haute and Ind.	73	924,100	456,000	1,465,321	239,992	159,323	10	----
Chicago and Rock Isl'd	182	3,141,500	2,387,155	5,214,152	In progr.	--------	----	85¾
Chicago and St. Louis	220	--------	--------	1,077,312	--------	--------	----	----
Chic., St. Paul & F'd du Lac.	178	2,300,000	1,325.000	3,625,000	In progr.	--------	----	----
Galena and Chicago	298	4,334,800	1,189,304	5,866.263	1,506,710	942,231	17	107½
Illinois Central	707	1,419,440	18.001,426	17,698.099	1,532,118	--------	----	94¾
Peoria and Oquawka	93	569,889	818,454	1,388,342	In progr.	--------	----	----
Ohio & Miss. (Wst. Div.)	147	1,780,295	3,292.403	4,870,586	Recently	opened.	----	----
Terre Haute and Alton	173	2,281,420	1,256,000	3,537,424	In progr.	--------	----	----
Detroit and Milwaukee	185	838,000	1,128,964	1,966,969	In progr.	--------	----	----
Mich. Central	282	6,021,916	6,142,023	10,300,147	2,215,283	879,656	----	89½
Mich. South'n & N. Ind.	475	6,928,900	6,319,224	11,645,208	2,410,000	875,000	10	86½
Green Bay, Mil. & Ch.	155	764,075	442,726	1,193,765	In progr.	--------	----	----
Milwaukee and Miss.	200	988,665	1,827.584	2,704,593	687,940	307,632	17	81
Milwaukee & Watert'n	72	354,861	132,000	514,238	In progr.	--------	----	----
Milwaukee and Horicon	92	--------	--------	31,000	In progr.	--------	----	----
Milwaukee & La Crosse	69	--------	--------	--------	In progr.	--------	----	----
Racine and Miss.	68	--------	--------	--------	In progr.	--------	----	----
Hannibal & St. Josephs	---	292,351	580,000	823,310	In progr.	--------	----	----
North Missouri	13	1,138,208	684,294	1,093,336	In progr.	--------	----	----
Pacific	130	2,803,692	3,903,174	6,463,726	160,000	In progr.	----	----
St. Louis and Iron Mt.	---	445,170	--------	186,115	In progr.	--------	----	----
Panama	49	3,743,000	--------	6,564,852	628,850	416,756	9½	99

U. S. GOVERNMENT SECURITIES.

	OFF'D. Per ct.	ASKED. Per ct.		OFF'D. Per ct.	ASKED. Per ct.
Loan, 6 per ct. 1856	103⅜	-----	Loan, 6 per ct. 1868	116⅜	116⅝
Do. 6 do. 1862	110⅜	-----	Do. 6 do. coup's 1868	116¾	-----
Do. 6 do. 1867	116⅜	116⅝	Do. 5 do. Tex. ind. 1866	106⅜	-----

STATE SECURITIES.

Maine, 6 per ct. 1870	101	104	Indiana, Can. Loan, 6 per ct.	----	-----
Massachusetts, 5 per ct. 1859	97	99	Do. do. pref. 5 do.	----	20
Do. 5 stg.	100	101	Kentucky, 6 per ct. cp. 1869-72	100	100¼
New York, 6 per ct. 1860-62	106	-----	Louisiana, 6 do. cp. long	88	88
Do. 6 do. 1864-65	114	-----	Maryland, 6 do cp. 1870-90	------	105
Do. 6 do. 1866-67	------	-----	Do. 5 do. cp.	----	----
Do. 6 do. 1872-73	116	-----	Missouri, 6 do. cp. 1872	84	84½
Do. 5½ do. 1860 61	103½	104½	N. Carolina, 6 do. cp. 1873	95	----
Do. 5½ do. 1865	104	-----	Ohio, 6 do. 1856	100	-----
Do. 5 do. 1858-60	100¾	101½	Do. 6 do. 1860	103	103½
Do. 5 do. 1866	102	103	Do. 6 do. 1870	108	110
Do. 4½ do. 1858 59-64	----	99	Do. 6 do. 1875	110	-----
Alabama, 5 do. coup.	------	-----	Do. 5 do. 1865	------	-----
California, 7 do. coup. 1870	84	84¼	Penna., 5 do.	82½	83
Georgia, 6 do. do. 1872	97	----	Do. 5 do. cp. 1877	89¾	90
Illinois Int. Imp. 6 per ct. 1847	105	-----	Tenness. 5 do. cp.	----	80
Do. do. 6 do. Int'est.	----	70	Do. 6 do. cp.	92½	93½
Indiana, 5 do.	81¾	82	Virginia, 6 do. cp. 1886	98	98¾
Do. 2¼ do.	54	60			

Railroad Bonds.

The following quotations are ex-interest.

NAMES OF COMPANIES.	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked.
Alabama and Tennessee River	$838,000	1st mortgage, convertible	7	1st Jan. 1st July	N.Y.	1872	-----	85
Buffalo and State Line	500,000	Do. inconvertible	7	April, October.	"	1866	-----	-----
Bellefontaine and Indiana	600,000	Do. convertible	7	Jan'y, July	"	1866	90	95
Do. do.	200,000	Real estate, convertible	7	Jan'y, July	"	1858	90	92½
Do. do.	200,000	Income, guar. Cl. Col. & Cin.	7	Feb'y, August.	"	1859	-----	-----
Central Ohio	1,250,000	1st mort. conv. east. sec.	7	Divers	"	1861-64	-----	81
Do.	800,000	2d do. inconvertible	7	March, Sept.	"	1865	-----	75
Cincinnati, Hamilton, and Dayton	500,000	1st mortgage inconvertible	7	20. Jan. 20. July	"	1867	-----	93
Do. do. do.	465,000	2d do. do.	7	May, Novemb.	"	1880	80	83
Cincinnati and Marietta	2,500,000	1st mortgage, conv. till 1862	7	Jan'y, July	"	1868	75	80
Cincinnati, Wilmington, and Zanesville	1,300,000	Do. convertible	7	May, Novemb.	"	1862	-----	90
Cleveland, Painesville, and Ashtabula	567,000	Do. inconvertible	7	Feb'y, August.	"	1861	-----	92½
Cleveland and Pittsburgh	800,000	Do. convertible	7	Feb'y, August.	"	1860	-----	93
Do. do.	1,200,000	Do. on Branches	7	March, Sept.	"	1873	-----	85
Cleveland and Toledo	525,000	Do. inconvertible	7	Feb'y, August.	"	1863	-----	87½
Chicago and Mississippi	800,000	Do. conv. till 1857	7	April, October.	"	1862-72	-----	86
Do. do.	1,200,000	Do. inconvertible	7	April, October.	"	1862-72	-----	86
Covington and Lexington	400,000	Do. do	6	April, October.	"	1862	73	76
Do. do.	1,000,000	2d mortgage, convertible	7	March, Sept.	"	1883	-----	65
Delaware, Lackawanna, and Western	1,500,000	1st mortgage, do.	7	April, October.	"	1875	84	90
Fort Wayne and Chicago	1,250,000	Do. conv. till 1863	7	Jan'y, July	"	1873	75	80
Galena and Chicago	2,000,000	Do. inconvertible	7	Feb'y, August.	"	1863	97	----
Do. do.	2,000,000	2d mortgage, do.	7	May, Novemb.	"	1875	88½	89
Great Western (Illinois)	1,000,000	1st mortgage, do.	10	April, October.	"	1868	85	90
Green Bay, Milwaukee, and Chicago	400,000	Do. convertible	8	10. April, 10. Oc.	"	1863	94	95
Jeffersonville	300,000	Do. 2d sec. inconv.	7	April, October.	"	1873	-----	75
Indiana Central	600,000	Do. convertible	7	May, Novemb.	"	1866	-----	90
Indianapolis and Bellefontaine	450,000	Do. do.	7	Jan'y, July	"	1860-61	-----	92
Indianap. & Cin'ti (for Lawb. & U. M.)	500,000	Do. conv. till 1857	7	March, Sept.	"	1866	-----	-----
La Crosse and Milwaukee	950,000	1st mort. 1st sec. conv. till 1864	8	May, Novemb.	"	1874	-----	85
Lake Erie, Wabash, and St. Louis	3,400,000	1st mortgage, conv. till 1859	7	Feb'y, August.	"	1865	-----	76
Little Miami	1,500,000	Do. inconvert.	6	2. May, 2. Nov.	"	1883	78	80
Michigan Central	1,000,000	No mortgage, convertible	8	April, October	Bost.	1860	98	100
Do.	600,000	Do. do.	8	March, Sept.	"	1869	100½	101
Milwaukee and Mississippi	600,000	1st mort. 1st sec. conv. till 1857	8	Jan'y, July	N.Y.	1862	97¾	99
Do. do.	650,000	Do. 2d do. 1858	8	April, October.	"	1863	94	95
Do. do.	1,250,000	Do. 3d do. 1860	8	June, Decemb.	"	1877	88½	89½
New Albany and Salem	500,000	Do. 1st section	10	April, October.	"	1858-62	-----	101
Do. do.	2,325,000	Do. oth. sec. con. till 1858	8	May, Novemb.	"	1864-75	-----	80
Northern Cross	1,200,000	1st mortgage, convertible	8	Jan'y, July	"	1873	90	94
Ohio and Indiana	1,000,000	Do. do.	7	Feb'y, August.	"	1867	-----	100
Ohio and Pennsylvania	1,750,000	Do. do.	7	Jan'y, July	"	1865-66	92	95
Do. do.	2,000,000	Income, convertible	7	April, October.	"	1872	78	83
Pennsylvania (Central)	5,000,000	1st mortgage, conv. till 1860	6	Jan'y, July	Phila.	1880	92½	93½
Scioto and Hocking Valley	300,000	Do. 1st sec. conv	7	May, Novemb.	N.Y.	1861	-----	83½
Steubenville and Indiana	1,500,000	Do. convertible	7	Jan'y, July	"	1865	-----	78
Terre Haute and Indianapolis	600,000	Do. do.	7	March, Sept.	"	1866	-----	-----
Terre Haute and Alton	1,000,000	Do. do.	7	Feb'y, August.	"	1862?72	75	77
Do. do.	2,000,000	2d do. do.	8	Feb'y, August.	"	1870	74	75

The following quotations include the accrued interest.

NAMES OF COMPANIES.	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked
Baltimore and Ohio	2,500,000	Mortgage	6	April, October	Balt.	1885	84	84½
Do. do.	1,128,500	Do.	6	Jan'y, July	Balt.	1875	86½	88
Chicago and Rock Island	2,000,000	1st mortgage, conv. till 1858	7	10. Jan. 10. July	N.Y.	1870	89	89½
Erie Railroad	3,000,000	1st mortgage	7	May, Novemb.	"	1867	108	110
Do.	4,000,000	2d mortgage, convertible	7	March, Sept.	"	1859	95¾	96
Do.	6,000,000	3d mortgage	7	March, Sept.	"	1883	90	92
Do.	4,000,000	Not conv. Sink. Fund, $420,000	7	Feb'y, August.	"	1875	89¾	90¼
Do.	4,351,000	Convertible, Inscription	7	Feb'y, August.	"	1871	81	83
Do.	3,500,000	Convertible	7	Jan'y, July	"	1862	84	----
Hudson River	4,000,000	1st mortgage, Inscription	7	Feb'y, August.	"	1869-70	97	99
Do.	2,000,000	2d do. do.	7	16. June, 16. Dec	"	1860	82	84
Do.	3,000,000	3d do. convertible	7	May, Novemb.	"	1870	63	64
Illinois Central	17,000,000	Mortgage, inconvertible	7	April, October.	"	1875	81	81¼
Do. (Free Land)	3,000,000	M'ge 345,000 acrs-priv. 7 shar's	7	March, Sept.	"	1860	86	87
Michigan Southern	1,000,000	1st mortgage, inconvertible	7	May, Novemb.	"	1860	91½	----
New York and Harlem	1,800,000	Do. do.	7	May, Novemb.	"	1861-72	80	81
New York and New Haven	750,000	No mortgage, do.	7	June, Decemb.	"	1855'60'6	78	80
New Haven and Hartford	1,000,000	1st mortgage, do.	6	Jan'y, July	"	1873	-----	97½
Northern Indiana	1,000,000	Do. do.	7	Feb'y, August.	"	1861	92	94
Do. Goshen Branch	1,500,000	Do. do.	7	Feb'y, August.	"	1868	84	84½
New York Central	8,287,000	No mortgage, do.	6	May, Novemb.	"	1883	85½	86
Do. do.	3,000,000	No m'ge conv. from June 57-59	7	15. June, 15. Dec	"	1864	100¼	100¾
Panama, 1st issue	900,000	Convertible till 1856	7	Jan'y, July	"	1866	99	100
Do. 2d do.	1,478,000	Do. till 1858	7	Jan'y, July	"	1866	99	100
Reading, issued 1843	1,573,000	Mortgage, inconvertible	6	Jan'y, July	Phila.	1860	----	----
Do. do. 1844, '48, '49	1,300,000	Do. convertible	6	Jan'y, July	"	1860	89	91
Do. do. 1849	3,469,000	Do. inconvertible	6	April, October.	"	1870	85	86

CITY SECURITIES.	Int'st payable.	Off'd p. ct	Askd p. ct.	CITY SECURITIES.	Int'st payable.	Off'd p. ct.	Askd p. ct.
New York. 7 per ct.-----1857	Feb'y, May,	100	-----	Milwaukee, 7 per ct. coup. ----- X	Divers -------	81	82½
Do. 5 do. ----1858-'60	August and	97	98	New Orleans, 6 per ct. cp. R.R. X	Do. -------	----	78
Do. 5 do. ----1870-'75	November --	99½	100½	Philadelphia, 6 per ct. --1876-'98	Jan'y, July ---	89¾	90
Albany, 6 per ct. coup. 1871-'81 X	Feb'y, August.	96	97½	Pittsburgh, 6 per ct. coup. ----- X	Divers -------	75	77
Alleghany, 6 per ct. coup. ------X	Jan'y, July ---	64	69	Quincy, 8 per ct. coup. ----1868 X	Jan'y, July---	92	94
Baltimore, 6 per ct. ----1879-'90	Quarterly-----	97	98	Racine, 7 per ct. coup. ----1873 X	10. Feb'y, Aug.	81	85
Boston, 5 per ct. coup. ---------X	April October.	98	100	St. Louis, 6 per ct. coup. --Long X	Divers -------	78	78½
Brooklyn, 6 per ct. coup. Long X	Jan'y, July---	99	-----	Do. do. Municipal -- X	Do. -------	78¼	79
Clev'l'd, 7 per ct. cp. W. W. 1879 X	Do. do. ---	100	101	Sacramento, 10 p.ct. cp. 1862-'74 X	Do. -------	76½	77½
Cincinnati, 6 per ct. coup. ------X	Divers -------	88½	89½	S. Fr'cisco, 7p.c.cp. 1865, pay. N.Y. X	May, Novemb.	-----	85
Chicago, 6 per ct. coup. 1873-'77 X	Jan'y, July---	88¼	89	Do. 10 p. ct. cp. -----1871 X	Do. do. -	91	92
Detroit, 7 per ct. cp. W W. 1873-'78 X	Feb'y, August.	101	102	Do. 10 do. pay. N. Y.--- X	Jan'y, July----	-----	105
Louisville, 6 per ct. cp. --1880-'83 X	Divers ------	79	79½	Wheeling, 6 per ct. coup. ------ X	Divers -------	----	70
Memphis, 6 per ct coup. --1882 X	Jan'y, July---	-----	72½	Zanesville, 7 do. ------ X	April. October	-----	97½

Cincinnati Stock Sales,

By KIRK & CHEEVER.

For the week ending January 22d, 1856.

BONDS.

	Per ct.
Cin. & Chicago, 10 per ct. R'al Estate, Butler & Meredith	40
Indianap. & Cin., 2nd Mort. 7 per ct.	77
Cin., Wil. & Zanes. 2d Mort. 7 per ct.	62
Covington & Lexington, 2nd Mort. 7 per ct.	65
Ohio & Mississippi, 2nd Mort. 7 per ct.	42
Covington & Lexington, 10 per ct Income	62
Little Miami, 6 per ct. Mort.	80
Cin., Ham. and Dayton, 2nd Mort. 7 per ct.	88

STOCKS.

Cin., Wilm. and Zanesv., 23.—Cin., Ham. and Dayton, 64.—Col. & Xenia, 82½.—Cincinn. & Chic., 10¼.—Central Ohio, 15.—Covington and Lexington, 21.—Dayton and Western, 20.—Eaton and Hamilton, 30.—Fort Wayne and Southern, 10.—Indiana Central, 47.—Indianapolis and Cincinnati, 15.—Little Miami, 88.—Mad River and Lake Erie, 20.—Marietta and Cin., 18.—Ohio and Mississippi, 5.—Hillsboro' and Cincinnati, 18.—Junction (Indiana), 10.

By HEWSON & HOLMES.

For the week ending January 23d, 1856.

BONDS.

$4,000	Coving. & Lex., 7 per ct. 2nd Mortgage	67¼
3,000	Cin. & Chic., 8 per ct. Real Estate	35 (& int.)
5,000	Cov. and Lex., 10 per ct. Income	62½
2 000	Cin., Wilm. and Zanesv, 7 per ct. Income	51¾ "
2,000	Ohio & Miss. 7 per ct. 2nd Mort	40
3,000	Little Miami, 6 per ct., due in 1883	80
2,000	Marietta & Cin., 7 per ct. Domestic	50
1,000	Hillsboro' and Cin., 7 per ct. 1st Mort	50 "
500	Burnet House Stock	40

STOCKS.

30	Shares	Central Ohio	20
268	"	Indianapolis and Cincinnati	60
100	"	" "	60½
50	"	" "	61
119	"	Little Miami	90
30	"	Cin., Wil. & Zanesv	20 "
253	"	Indianapolis and Bellefontaine	20
100	"	Peru and Indianapolis	15
10	"	Columbus & Xenia	84
46	"	Eaton & Hamilton	30
100	"	Ohio & Mississippi	3⅞ "
310	"	" "	4 "
138	"	" "	4¼ "
100	"	" "	5 "
100	"	" "	6 "
74	"	" "	7⅛ "
85	"	Covington & Lexington	20 "
65	"	" "	20½ "
50	"	" "	21 "
20	"	Cincinnati, Hamilton, & Dayton	63

Mark & Kanz' Money Circular for the European Steamer of the 26th inst.

[TRANSLATED EXTRACT.]

New York, Jan'y 28, 1855.

Foreign Exchanges continue low, and the condition of the Money market shows a gradual improvement, But public Stocks remain dull, and in many instances the quotations are below those of our last circular, of the 18th inst. This state of things is due to the general cautiousness inspired by the present position of the London market. Our last advices from Liverpool are to the 12th inst., received per *Baltic* on the 24th. The intelligence was to the effect that money was growing still more stringent in London; that the Specie reserve of the Banks of England and France had again disappeared; and that Consols had fallen to 86. This news creates fears of a further advance in the Bank rate; and the recollection of the effect produced by like proceedings last Autumn, prompts those who feel disposed to purchase to await the decline which they expect must result from this circumstance.

State Stocks are steady with few sales. California and Missouri Bonds have fallen ¼ per cent; New York State 5s, 1860, have advanced 1, Indianas ½. City and County Bonds—some few sales have been made at St. Louis City, Milwaukee, and San Francisco 10 per cent. Bonds, with a slight decline on the two first. Some transactions have also been made in Des Moines County 8 per cent. Bonds. Railroad Bonds are weak, with a very limited movement. Chicago and Rock Island Bonds have declined 2 per cent.; Erie 1883, 1; Illinois Central Construction Bonds ½ per cent.—Freeland Bonds are offered at 87, and ex-privilege at 83 with few buyers. Erie 1862 Bonds have advanced 1 per cent. Bonds not dealt in at the Stock Exchange—Galena and Chicago 1st and 2d mortgages—are about the only ones which have led to any business.

Railroad Shares have been very dull. Chicago and Rock Island has declined 1 per cent.; Cleveland and Toledo 1½, Erie ¾, Galena and Chicago 3, Illinois Central 1, Michigan Central 1½, and

Reading 3 per cent.; Cleveland, Columbus, and Cincinnati has advanced 1, Cleve. and Pittsburg 4, Harlem ½, and Hudson River 1 per cent.; Milwaukee and Mississippi, after advancing to 85, has receded to 81¼.

Money is growing gradually easier. Loans on call at 7 per cent. First class paper 8 per cent.; names less current 9a11. Exchanges have not been active. London chiefly at 108⅛a108⅜.—Paris, 5.20a5.21¼.

MARIE & KANZ.

American Railroad Journal.

Saturday, February 2, 1856.

Authority of the Old Masters in Architecture.

(Continued from page 57.)

Let us pause. Is it true that these errors are the mistakes of architects alone? Are they not rather the result of a universal misconception, through which we have come to surrender our right to think,—a misconception, by which we are taught to regard as unqualified authority the works of past ages, sanctified by the glories of classic learning and poetry, or the genius and devotion of pious bishops.

This mistake assumes, that the tastes of certain periods were perfect. That the flood of new discoveries and inventions, the increased number of of studies for taste, developed in a more general as well as more profound knowledge of the works ot nature, illustrated in the sciences, some of which are newly born—*a larger world than ever before known*—have failed to develop in any degree, the genius of man as to his appreciation of the beautiful in the fine arts; that, consequently, modern taste is not authority in architecture unless it is subservient to ancient art. This is the proposition. It is slavishly stated in the most emphatic tones through the portals of a thousand structures, that are to-day rising from the ground all over this country.

May we not gain something by a careful consideration of the facts that may demonstrate the unreasonableness of this state of things,—facts that seem not to enter the minds of our profession.

To facilitate the inquiry, we may at one and the same time notice the claims of MEDIÆVAL and GRECIAN masters. And here we ask leave to make a deflection. We wish to consider the Greek temples in common with what are known as Christian Orders, while we are aware of a popular notion prevailing, that they are inappropriate to the uses of Christian worship, the ground of objection to their use being, that they are heathen temples erected for the worship of false gods and are surrounded with associations not congenial to our religion. This notion we repudiate as not founded in truth.

Without endorsing the philosophy of Dr. Walker in treating of religion, we cannot so well express our own views concerning the worship of the Greeks than to cite his remarks on that interesting subject.*

"They must be ignorant indeed of the wonderful people of whom I now speak, who allege, that the Greeks worshipped the mere statue of the god and not the personified virtue. Even the history of their religion proves the reverse. It was the tomb which became the altar and retained nearly its form. It was the expression of love, of regret, of veneration for departed virtue, which became divine adoration; and, as individual acts and even individual names were ultimately lost in one transcendant attribute, so were individual forms and features, in its purified and ideal representation. Here, then, instead of finding the worship of men, or of their representations, we discover a gradual advance from beings to attributes—from mortal man to eternal virtue—and a corresponding and suitable advance from simple veneration to divine adoration.

"When in great emergencies of the State, the sages and the soldiers of Athens, in solemn procession repaired to the temple of Minerva, turned their faces toward the statue of the goddess, and prostrated themselves in spirit before her—let the beautiful history of Grecian science tell, whether in the statue, they worshipped the mere marble structure or in its forms and attributes beheld and adored a personification of eternal truth and wisdom and so prepared the mind for deeds, which have rendered Greece forever illustrious. Or when returning from a Marathon or a Salamis the warriors of Athens followed by trains of maidens and matrons and old men offered thanks to the god of victories—let the immortal record of the long series of glorious achievements which succeeded these, tell, whether gratitude to their heroes was not there identified with homage to the spirit or the divinity that inspired them.

"True it is, that, whenever physical or moral principles are personified, the ignorant may be led to mistake the sign for that which is signified; but one of the most admirable characteristics of the Grecian religion is, that with a little effort every external form may be traced to the spirit, which it represents and every fable may be resolved into a beautiful illustration of physical or moral truth. So that, when mystic influences with increasing knowledge cease to sway the imagination, all powerful truths directed the reason."

In all this, Dr. Walker does not vindicate the errors and absurdities, which poets and others introduced into mythology.

We shall be understood, therefore, as justifying those artists, who have not subscribed to the ridiculous doctrine that on philosophical ground erases the architecture of the classics from ecclesiastical orders.

We resume the discussion as indicated.

It would seem to be a sufficient reply to make those who insist on our accepting terms from the ancients, that in all things in life we have need of other laws;—that, when free to choose, our tastes, in other matters than the fine arts, our passions and pursuits are of a higher kind; that the objects of our structures, even of the religious edifice are of another nature; that our civil and social institutions, more than all things else, are changed from those of the East. That, in short, we live in another time—another world.

To illustrate thoroughly this argument, would be to enter fields of science far too widely extended for the purpose of the present essay. It will be impossible to do more than touch on its various suggestions. Our object will be, not so much, to demonstrate the truth of the proposition as it will seek to impress on the mind of the architect the fact, such is the nature as well as the degree of differences alluded to, that the subject is worthy of serious study with reference to his art.

We shall have accomplished an important end, if we succeed in prevailing on our brethren to think independently.

First. Though it appear hardly necessary to invite attention to the social condition of past ages, whether of the ancient Greek and Roman Schools or the later builder of mediæval periods, with the phenomena of which every scholar is familiar, still, it is believed that much good would result from a careful study with reference to this question. For instance; a glance at the Grecian theater would reveal a condition of things so gross, that polite ears might not listen to the recital; this grossness not constructive but absolute and positive, as for instance in Aristophanes' comedies,—betraying a bestiality of mind quite inconsistent with our idea of superior culture. Yet this amusement is *classic*.

Classic too, is that Etruscan bronze seal, excavated near Cortona*—representing a conference between an adulteress and her lover—with a figure of the Leno, who planned the meeting. Yes classic! As may be supposed, classic virtue among women was of another sort from what is expected of Christian women. Instead of chastity they had fortitude and certainly fortitude is an admirable virtue. Its value among the Romans cannot be better illustrated than in the life and death of Porcia, the daughter of Cato, who by thrusting a knife into her thigh and supporting it there during eight days without complaining, proved to Brutus her fitness to be a confidant in his conspiracy, and who on his defeat showed still her devotion to her husband by swallowing burning coals and so ending her life.

Woman had much the same influence in society that she has now; her power over men is sufficiently illustrated in the anecdote of Themistocles,† who said of his infant boy, "This little fellow is the most powerful person I know, for he completely governs his mother, *while she governs me*, and I the whole of Greece."

Without pursuing this thought, which, while it has its value, does not bear directly on the case in hand, we pass to what it must be acknowledged, has immediate reference to our ecclesiastical architecture.

1. The temples of the gods as well as the early English churches were not visited by the people for the purposes to which the modern Christian church is dedicated. The ancient devotee went to worship; and only to worship. The modern disciple enters the sacred building for the purposes of worship, but also for communion with the saints and to hear those lessons concerning life, that teachers of his own caste may read to him. Thus our congregations are to a certain extent, social gatherings, and have the need of new arrangements, even new conceptions.

This was not comprehended by the Clerical Architect of the middle ages. For their time, doubtless, they did well. But religious practices are modified. We no longer enter the church for the purpose of mortifying the flesh, while we listen to the preacher. In all our notions of comfort, we demand higher provisions for its enjoyment

* Walker on Beauty, pp. 30—34.

* Mus. Cortoneus. tab. 18.

† Plut. Themistocles.

than was thought essential to the happiness of men five hundred or more years ago.

Thus the subject of ventilation is now well understood, and the contrivance for its proper conduct and regulation is as much the province of the Architect as the designing of the structure.

Now, too, we may justly complain, if we are forced to sit on narrow, uncomfortable seats, so very correct in being modeled on a Christian pattern of the fifteenth century, that after its use we feel that we may have indeed been born in that age. We have learned what they did not know—the art of making a comfortable seat. Let us have the advantage to be derived from that knowledge.

The laws of acoustics, and the proper aportioning of light demand a consideration they have not received. What has been the course pursued by the artists of America? Without arriving at the true spirit of the art, they have fastened upon our cities most costly buildings that will in time come to be regarded as the work of unscientific hands—the fruits of ignorant genius.

But we have a choice to make; either we must tear down some ancient landmark and regulate the proportions of the edifice and its form with reference to correct natural principles, or we must still preserve cumbrous intrusions to be disguised as ornaments, with unreasonable apportionment in every important particular, while we rest contented that we have present "a pure example of one of those fine old churches of the middle ages!"

2. The higher conception of what constitutes a religious life, should have an important bearing on Sacred Architecture; especially in its influence on the lighting and decoration of churches. The days of asceticism have passed. The dull, gray life of the trembling religionist who loved Christ solely because he feared the Devil, has given place to the cheerful earnestness of the hopeful child of God. The object of life is to live—not to die; to increase in knowledge of all that is good and great; and truth. Christian life is an aspiration heavenward; not a sigh nor a moan in dread of evil.—Hence, then, the "dim religious light" of the old Bishops will not be found suited to the wants of a nobler age. Light! More light! is the great demand of the day, perhaps in nothing more than theology. And for this reason do we build our churches, and place in the Pulpit wise men to expound the Faith.

The light of the forest is not dim though soft.—Streams of sunshine come pouring down through the windows of that temple, like beams of truth from God's everlasting throne. This light from above in the natural forest is beautifully significant; but in thé structures to which it suggests the most, we rarely see such a thought indicated. The simplest and noblest form in which it can be applied is the dome, which at the same time pictures forth that grander dome, whence light is supplied to the world.

We are more than ever struck with the beauty and appropriateness of the dome to the Christian temple, since the erection in this city of the beautiful Church of All Souls—beautiful and complete as it stands now, without the campanile and spire.

As to sentiment, the dome is equally significant, while more reasonable than the spire. True, the spire points heavenward; but then it is pretentious; angular, crystaline, harsh; sharp, narrow, contracted; and such its moral.

The dome is equally celestial in its aspirations. It is modest in its ambition; soft and gentle. It conveys an impression of liberality and Christian benevolence, as an opening hand dispenses treasure. And as its horizontal lines give breadth and scope, it tells of large views and profound. It shadows forth a guardian hand that shelters while it protects *all souls*. Admitting a light directly from the skies, it suggests an unerring light from the fountain of truth.

It is only strange, that after the glorious example in the old world, we who have copied every possible deformity, have neglected this principal beauty.

3. The extended sphere of commerce and trade, with the attending improvements in the arts of navigation and locomotion, seems in their power to have forced changes of some sort in civil art. This influence is not limited to those buildings that are used for mercantile purposes. It is seen in the architecture of the mansion house. Commerce with its necessities having called for new ships, that are built to suit the demands of the business in which they shall be engaged, the same spirit of independent originality extends to the storehouse and dwelling of the merchant.

It is hardly possible to say as much of the Railroad Depots of the country, for which men of the most comprehensive profession are to a degree responsible. Out of New England, there are few decent buildings for the purpose in the United States. And there, some beautiful designs are mutilated by that everlastingly present mania to build "*correct examples.*"

However, notwithstanding this mistake in exterior design, a real treat is found in contemplating the ingenious arrangement of Roof-trusses, whether of wood or iron. And this leads to the thought that commerce, in its progress and increasing wants, develops the means of satisfaction. Thus, without being aware of its approach, a new order of Civil Architecture is forced on us. It is impossible to escape the fact, wherever we go, in the world of towns that a revolution approaches in the art of design, as well as of building. With all its frivolities, so whiningly dwelt on by weeping editors and moralists, we live in an age of strength and power; an iron age.

This material, iron, is hewing its way through the prejudices of artist and mechanic; is sapping the foundation of ancient orders. True, it has yet developed few examples above a handsome stove pattern; but we are not sure the study of stoves may not be of use to the speculations of the designer. A thousand tastes are illustrated in these household fixtures, and varied purposes. Very fortunate is it that cast-iron stoves were generally introduced in this country before iron was applied to outside building purposes. Otherwise we should have been vexed with the constant effort to mould it in the forms, and in this case, unscientific proportions of Grecian art. As it happens, we find a refreshing originality present in almost every iron building.

(To be continued.)

☞ The attention of parties using stationary engines is asked to the advertisement of McNab & Carr in another column.

California.

SACRAMENTO VALLEY RAILROAD.

We learn that the first division of this road, being about 23 miles, has been completed and is now in successful operation. Its line is identical with the great route of travel from the city of Sacramento to the mines; so that the road must at once enter upon a very large business, which at California prices, would make it the best stock of the kind in the country.

The road has been constructed in the course of a few months by a party of enterprizing contractors from this city. The dispatch with which it has been built is characteristic of everything that relates to California.

The opening of this road inaugurates a new era in the history of this State. It will form the base of a great system not only for California, but embracing, perhaps, the continent in its folds. California is now stretching out her iron arms to meet those in progress from the East. The construction of railroads on the Pacific coast cannot fail to exert a very strong influence on promoting the construction of a great line spanning the continent.

We notice by the California papers that the road is held in high favor in that State, and that as dear as money is, the stock is selling only at a small discount from par in San Francisco.

Reading Railroad.

Below we give an abstract of the Report of this road for the year ending November 30th, 1855.

GENERAL ACCOUNT.		Dr.
Railroad		$14,197,978 81
Depots		282,242 94
Locomotive engines and cars		2,791,716 42
Real estate		1,172,996 47
Telegraph stock		19,180 00
		$18,464,114 64
Expended in 1855:		
Railroad, for new sidings, &c.	$21,748 46	
New stone bridges	134,173 11	
New engines and cars	281,389 29	
New depot expenses	29,961 11	
Real estate, bought	53,877 32	
Telegraph stock	200 00	
Workshops	11,225 18	
New engine house, Pennsylvania Avenue	7,491 08	
		540,065 55
Total		$19,004,180 19
Assets:		
Cash		$101,966 90
Bills receivable		58,346 32
Freight and toll bills, receivable first week in December, 1855		129,793 84
Total		$290,107 06
Less wages, materials, bills, and drawbacks		168,045 91
		$122,061 15
Stocks and bonds held by the company		591,491 01
Materials on hand, current business of the road, and debts incurred for 1856		413,212 29
Debts due the company incurred in current business	$128,640 37	
Debts due to the comp'y, partly secured by real estate	$746,209 15	
Less pr'b'ble loss	248,367 07	
	497,842 08	
		622,182 15
		$1,753,246 90

Liabilities:		
Bills payable		$901,844 98
Debts due by the company		215,378 09
Coupons to Jan'y 1st, 1856		154,158 00
Interest on real estate bonds		9,449 35
Sinking Fund bonds, 1836-60		773 01
Do. do. 1849-70		31,178 33
Balance of Dividend Fund, 1855	$1,115,848 30	
Less paid on account of construction, and carried to capital acc't	675,383 11	
		440,465 19
		$1,753,246 90
		Cr.
Stock, per Report, Nov. 30th, 1855	$6,508,216 87	
New stock	2,546,050 00	
		$9,054,266 87
Preferred stock		1,551,800 00
Sinking Fund stock, per Report, Nov. 30th. 1854	$70,293 03	
Add 1870 Bonds, convertible	$130,000	
Add 1860 Bonds convertible	24,000	
	154,000 00	
		224,293 03
Balance of Dividend Fund, 1854, reserved	$89,362 64	
Less State Taxes, 1854, paid	29,725 46	
		59,637 18
		$10,889,997 08
Balance of construction account, carried to Floating Debt, in debts and assets accounts of 1854	$516,642 10	
Expended in 1855	540,065 55	
Bonds and mortgages paid off	4,000 00	
Taxes in 1854	29,725 46	
	$1,090,433 11	
Less amount of stock issued	415,050 00	
Transported from Dividend Fund		675,383 11
Loans:		
5 per cent. Bonds, 1836-60, unconvertible	$777,600 00	
Bought with Sinking Fund	24,000 00	
		753,600 00
6 per cent. bonds, 1847-56, convertible		10,000 00
6 per cent. bonds, 1843-60, unconvertible		1,572,800 00
6 per cent. bonds, 1844-60, convertible	$1,032,000 00	
Converted	47,000 00	
		985,000 00
6 per cent. bonds, 1848-60, convertible	$1,205,000 00	
Converted	1,051,000 00	
		154,000 00
6 per cent. bonds, 1849-60, convertible	$1,152,090 00	
Converted	1,033,000 00	
		119,000 00
6 per cent. bonds, 1849-70, and 1850, unconv'tible	$3,469,600 00	
Bought with Sinking Fund	130,000 00	
		3,339,600 00
Bonds and mortgages real estate, per Report, Novem- 30th, 1854	$508,800 00	
Paid off	4,000 00	
		504,800 00
Total		$19,004,180 19

The following is a comparative abstract of the Reports of 1854 and 1855:—

	1854.	1855.
Construction cost	$18,464,114	$19,004,180
Funded debt	$9,219,000	$6,934,000
Common stock	6,508,216	*9,478 509
Mortgages	508,800	504,800
Preferred stock	1,551,800	1,551,800
Unfunded debt	516,642	
Total debt and stock	$18,304,458	$18,469,109
Surplus profits	159,656	535,071
Total as above	$18,464,114	$19,004,180

* Including dividend issue to be made Feb'y 1.

The decrease in funded debt is		$2,286,000
By voluntary conversion	$2,131,000	
Purchase for conversion	154,000	
		$2,285,000
The increase in common stock is		$2,970,292
For new construction at par.	$415,050	
In conversion of bonds	2,131,000	
To issue for 4 per cent. dividends	424,242	
		$2,970,292

Last year the unfunded or ledger accounts of the company stood:—

Dr.—For sundry temporary liabilities	$1,744,788
Cr.—Stocks, bonds, materials and debts due	1,228,146
Leaving a floating balance of	$516,642

This year the same accounts stand:—

Dr.—For sundry temporary liabilities	$1,753,246
Cr.—For assets in stocks, &c. on hand	1,753,246

Last year the dividend accounts exhibited:—

Sinking Fund for conversion	$70,293	
Dividend Fund proper	723,340	
		$793,633
Less issue of dividend stock		633,977
Balance in construction		$459,656

This year these accounts stand:—

In Sinking Fund	$293,930	
Dividend Fund proper	675,373	
		$959,313
Less issue to be made of dividend stock		424,242
Balance in construction		$535,071

Augusta and Waynesboro Railroad.

This road commenced in 1852, was opened early in the Spring of 1854. Its line commenced at *Millen*, on the Central railroad, 79 miles from Savannah, and extends to Augusta, a distance of 53 miles.

The total cost of the road on the first day of January, 1855, according to the first annual report of the company after the opening of the road, was as follows:

Right of way	$10,496
Engineering	39,769
Construction	904,964
Interest	109,057
Salaries, &c., &c	17,524
Total	$1,082,260

The sources from which the above amount were derived are as follows:

Capital stock	$727,500
Bonds 298,500 (less 17,217 discount	281,287
Earnings received from Central Railroad to Jan'y, 1854	34,328
Loans	39,228
	$1,082,343

The road up to Jan'y 1, 1856, has been worked under a contract with the Central company whereby the latter agreed to pay a rent of $18,000 per year till the road opened, and after that seven per cent. on the cost of the road. The total amount paid over to the Waynesboro company under this lease has been as follows:

Paid to Jan'y 1, 1854	$34,827
" from January 1st, 1854, to April 1st, 1855	80,258
" from April 1st, 1855, to January 1st, 1856	57,872
Total amt. received to Jan. 1, 1856	$172,458
Received from miscellaneous sources	98
Total receipts	$172,556

DISBURSEMENTS.

Earnings expended prior to 1st Jan'y, 1854	$34,327 89
Paid Liabilities existing 1st January, 1854	39,227 80
" Interest on do	3,851 84
" Liabilities not embraced in last report	436 76
" Interest coupons prior to April 1, 1855	24,233 89
" Interest coupons prior to August 1855	10,447 50
" On account of "construction"	5,578 62
" Right of way, taxes at Augusta, salaries, and incidental expenses	2,355 19
	$120,459 49
Balance on hand	$52,096 91
The present floating liabilities of the company may be put down in round numbers at	$72,000 00
Amount of cash on hand	52,096 91
	$19,903 09

The total cost of the road to Jan'y 1, 1856, was $1,157,000.

The total receipts to the Central road from the Waynesboro railroad, since its opening, have been as follows:

	Pas'grs.	Freight.	Tota
1853	$7.134	$2,266	$1,050
1854	35,861	16,458	5,325

The gross revenue from the Augusta and Waynesboro railroad for 1855 were $106,881. We are not able at the present time to state the proportion of passenger and freight earnings.

The lease of the Central company terminated on the 1st of Jan'y, 1856.

Columbus and Xenia Railroad.

The sixth annual report of this company, for the year ending 30th November, 1855, shows their business for that period to have been as follows:

Passenger earnings	$167,177
Freight "	160,274
Mails, &c., "	11,608
	$339,060
Net receipts from other sources, and error in former estimate of fuel	17,306
Total	$356,366
Working expenses	$168,848
Interest, rent, and taxes	36,149
	204,997
	$151,368
Dividend, 10 per cent.	$145,537

As compared with the gross earnings of 1854, the above shows a decrease of $1,721 33. On the other hand, though 36,000 more miles were run in 1855, the expenses have so far been diminished that the net gains are something in excess of 1854.

The causes assigned for this decrease are the short crops of 1854, increased competition by other roads, and also from the Ohio river, which remained navigable with hardly any interruption, during the whole of last summer—a circumstance that has not occurred to the same extent for many

years. The Central Ohio road was also out of order the greater part of the year.

The present abundant crops requiring to be transported, give good hopes of a large and profitable business for the present fiscal year. The tunnel on the Central road is now nearly completed, and no further interruption from this source is apprehended.

Much complaint, and we consider with justice, is expressed at those companies who are in the practice of reducing the charges for freight transportation, to a point below paying rates. Such a course is certainly suicidal. Were the public to take a proper view of the matter, instead of approbating such a course, it would instantly excite their suspicion that the road in itself was intrinsically *weak*, or its management radically wrong.

The two 5 per cent. dividends have both been declared in *stock*, the company having made heavy expenditures on construction, payment of debts, joint stock account, purchase of their own stock, &c., besides having a large surplus on hand at the close of the year.

The following are some of these items of extraordinary expense:

Construction, as bridges, depots, stations, &c., &c	$23,442
On joint stock account, for new machinery, &c.—Co's share	44,376
On payment of debts	33,524
Capital stock bought in	9,400
Amounts due by other railroad companies and individuals	9,980
Interest and taxes	36,149
Cash on hand	34,370
	$190,242

The asets and liabilities of the company, on the 1st of December, were:

ASSETS.

Length of road	54½ miles.
Side tracks	8½ "
Total	63 miles.
Construction acc't	$1,237,446
Equipment	244,287
Total	$1,481,733
Stock in other roads	178,050
Telegraph, steamboat, real estate, second track, joint stock and bonds, bills and acc'ts receivable, cash, &c	188,998
	$1,848,781

LIABILITIES.

Capital stock	$1,484,550
Mort. bonds, due 1859	18,000
Bonds issued to Central Ohio railroad company in payment of stock	60,000
Bills and acc'ts payable	71,091
Dividends and surplus acc't	215,140
	$1,848,781

The annexed extract from the President's report is worthy of special notice:

"The operations of your road during the past yerr has been quite satisfactory. The trains have been run with uniform regularity, and at the highest rates of speed consistent with safety. No accident of any moment has happened on the road during the year. No passenger has been killed, nor even injured, from the want of care on the part of the company, or any of its employees. Nor, we are happy to know, has this been peculiar to the past year. The road has been in operation nearly six years, having been opened in Feb'y, 1850, and notwithstanding the large number of passengers that have been carried over it during that time, none have been killed or seriously injured. Nor has any collision of trains or other alarming accident happened during that period. The result is, the reputation of the road for the safe and speedy carriage of persons and property is justly equal to that of any other railroad. This freedom from accident has not been simply fortuitous. It may be traced to causes, which if they had not existed, opposite results would doubtless have challenged your attention. Without detailing these causes, your Board would refer to the admirable discipline organized and enforced by your Superintendent among the employees, as one of the principal means that has given such security to the travel and trade that has passed over your road, to which may been added the superior structure of the road, the good working condition in which it has been uniformly kept, and the excellent character of the machinery and equipment. For the procuring of these no proper expense has been spared; your Board being satisfied that true economy, as well as a faithful regard for the public interests, have alike required that no expenditure should be withheld from the road or its appointments, that could reasonably add to the safety of the travel or to the regular and speedy transit of freight."

The rolling stock consists of 38 locomotive engines, of which 13 are first-class, 44 passenger, 14 baggage, and about 500 other cars of various kinds. Number of miles run by locomotive engines, 680,587. Cost of repairs per mile run $8.06.

The officers for 1856 are—

W. Dennison, Jr., President; W. H. Clement, Superintendent; S. E. Wright, Treasurer; and Cyrus Fay, Secretary. The remaining Directors are—Robt. Neil, Alfred Kelley, D. W. Deshler, R. W. McCoy, L. Goodale, W. B. Hubbard, Joseph R. Swan, all of Columbus;—Jacob Strader, Jno. Kilgour, and R. S. Springer, of Cincinnati; and Abm. Hivling, of Xenia.

Ohio and Mississippi Railroad.

The principal topic of conversation in financial circles yesterday, was the condition of this road, and the nature of the proposals said to have been made for its completion. It is now thoroughly understood, that its present condition, for the stockholder, is as bad as bad can be. This is sufficiently clear, from the fact, that for months past, the stock has been a mere foot-ball in the market, lighter than the lightest fancy, and last week, was worth but two and a half cents on the dollar, with, if possible, a downward tendency.

It is needless for us to attempt to trace all the causes, that have combined to produce this unfortunate result. * * * We come to the proposition in question.

To understand this, it is necessary that we first exhibit the present financial aspect of the Company's affairs.

The total am't of stock is	$6,383,035

This includes $1,000,000 issued to the city of Cincinnati, to secure the payment of its $600,000 loan of bonds.

Am't of 1st mort. bonds	$2,050,000
Am't of 2d mort. bonds	1,500,000
Floating debt	550,000
Due contractors	150,000
Total debt	$4,250,000
Add stock	6,383,035
Apparent cost	$10,336,035

It is hardly necessary to say, that all of this immense sum has not been expended upon the road or its appointments. The fact that the Company has paid eight per cent. annual interest upon its stock *in stock*—that some of its hypothecations have been made at rates recklessly low, and that it has submitted to enormous interests must explain most of the deficiency. The case rests as we have stated it, except that since the August reports, from which our figures are mostly taken, $228,000 additional interest has accrued.

Under all these circumstances, which, it must be owned, are sufficiently discouraging to the stockholders, an association of less than a dozen New York capitalists, but representing private fortunes, amounting to over fifteen millions of dollars, have offered to complete the road, according to the original specifications, and supply it with rolling stock. Among the parties interested are Wm. H. Aspinwall, Joseph W. Alsopp, Henry Chauncey, Charles Gould, David Leavitt, David Hoadley, and E. J. Woolsey.

The terms proposed are about as follows:

1. The Company shall issue mortgage bonds sufficient to bring the whole amount up to ten million dollars.

2. Cincinnati shall pay the interest upon her bonds, and look to her stock and wharf property, as security for her claims.

3. Contractors and holders of the floating debt shall exchange it for scrip, which will in turn be exchanged for these mortgage bonds 12 months after the completion of the road.

4. The capitalists to pay all other interests and to throw no bonds on the market until the road shall have been opened one year.

5. The whole line to be finished and in running order within eighteen months from the date of the contract.

The amount of *cash* necessary to be *advanced* by the capitalists, is estimated to be about thus:

To complete the road	$1,500,000
Add'l rolling stock	250,000
To pay interest now due	210,000
To pay int. next 18 months	372,710
Contingencies and expenses	100,000
Total	$2,432,710

They propose to take up the 2d mort. bonds, of which they can control the principal amount, by an exchange for the new issue, paying more or les premium. The result of the speculation to the capitalists, as near as we can cipher, *may* stand about thus:

2d mort. bonds	$1,500,000
Premium, say	300,000
Total	$1,800,000
1st mort. bonds	2,050,000
	$3,850,000
Total bonds	$10,000 000
Deduct	3,850,000
Leaves	$6,150,000
Probable value, say 70c	$4,305,000
Cost of completing road	2,432,710
Possible profit	$1,873,290

The estimates we have given are derived in part from the Company, and in part from the capitalists; and, of course, are but an approximation toward the actual figures that might appear in the future. We are satisfied, however, that they cannot be very far from correct. Hard as these propositions may appear to the city Treasury and the stockholders, they are a vast improvement upon their present situation; and if no better proposals are offered nor can be obtained, these should be accepted.

If the city should nominally lose half a million, it would be poured into her coffers over and over again by the advantages of the completed road. Trade and travel go North of us and ignore our existence, for the want of this great through line of communication with the West and South.—*Cincinnati Commercial.*

Fort Wayne and Chicago Railroad.

The tracklaying on the Fort Wayne and Chicago Railroad was completed to Columbia on the 23d inst., and the road is now open to that point, the county seat of Whitley county, 20 miles west of Fort Wayne. The track laying west of Columbia will be resumed with the opening of Spring, and reach Plymouth early in the summer, where a temporary connection with Chicago will be formed by way of the Peru and Laporte road.

Railroads of New York.

Statement showing the length, cost, amount of stock, debt, gross earnings and expenses of all the railroads of New York, for one year, ending Sept. 30, 1855.

Name of Corporation.	Length of track laid.	Length of d'ble track including sidings.	Total cost of road, equipment, and other expenditures.
Albany Northern	*33.00	3.25	$1,739,004
Troy and Rutland	31.77	..	344,188
Alb. & W. Stckb'g	38.00	6.00	1,930,895
Blossburg & Corning	14.81	1.60	496,058
Blck River and Utica	16.00	1.44	974,000
Buff. & N. Y. City	91.00	5.50	3,401,868
Buff. & State Line	69.00	12.50	2,494,364
Buff. Corn. & N. Y	100.00	6.25	2,819,096
Roch. & Gen. Valley	18.45	1.25	693,961
Brooklyn City	17.16	17,26	844.344
Canan. & N. Falls	98.57	6.89	3,495,832
Canan. & Elmira	46.84	2.86	1,275,796
Chemung	17.40	2.06	400,000
Cayuga and Susq	34.61	3.49	971,976
Eighth Av., N. Y	4.89	5.09	....
Flushing	7.80	0.39	310,962
Hudson and Boston	17.00	026	175,000
Hudson River	144.00	101.00	12,737,898
L. Island, Hicksville & Cold Spring Br	95,00	10.05	2,558,986
N .York Central	555.88	306 20	28,523,913
N. York & Erie	464.00	265.00	33,742,317
N. York & Harlem	130.75	30.38	6,458,804
N. York & N. Haven	62.00	58.25	4,906,794
Northern (Ogdensb'g)	118.00	17.75	5,470,535
Oswego & Syracuse	35.17	2.40	723,683
Pottsdam & Watert'n	29.36	0.50	749,683
Rens. & Saratoga	25.22	2.01	896,423
Saratoga & Schenec	21.00	1.57	480,020
Syracuse & Bing	79.69	5.34	2,272,777
Saratoga & Whitehall	41.25	3.77	895,000
Sixth Av., N. Y	3.75	4.12	786,657
Second do	9.00	9.00	426,323
Troy & Boston	27.23	3.23	1,109,821
Troy and Bennington	5.38	0.23	248,260
Troy & Greenbush,	6.00	..	*294,796
Third Av., N. Y	5.75	5.75	1,170,000
Watert'n & Rome	96.76	10.11	2,068,063
Totals	2,611.49	912.25	$128,888,080

Name of Corporation.	Amt. of capital stock now paid in.	Total amount now of funded and floating debt.
Albany Northern	$439,094	$1,300,000
Troy and Rutland	249,939	130,879
Albany and W. Stock'bge	1,000,000	930,895
Blossburg & Corning	250,000	223,007
Black River & Utica	643,330	317,859
Buff. & N. Y City	798,439	2,587,849
Buff. and State Line	1,300,000	1,040,000
Buff., Corning, & N. Y	1,487.874	1,499,783
Roch. and Gen. Valley	554,270	176,118
Brooklyn City	902,660	none.
Canan and Niag. Falls	1,315,000	2,279,854
Canan. and Elmira	434,111	922,393
Chemung	380,000	70,000
Cayuga & Susquehanna	687,000	506,686
Eighth Av., N. Y	762,500	....
Flushing	133,131	250,866
Hudson River	3,758.466	9,250,362
Hudson and Boston	175,000	none.
Long Island, Hicksville, and Cold Spring Br'ch.	1,875,148	668,949
N. Y. Central	24,154,860	14,462,742
New York and Erie	10,023,958	25,906,540
New York and Harlem	5,717,100	4,069,769
New York & N. Haven	2,992,450	2,264,656
Northern (Ogdensb'g)	1,633,022	4,406,874
Oswego and Syracuse	393,512	216,681
Pottsdam and Watert'n	467,200	294,189
Rensselaer and Saratoga.	610,000	140,000
Saratoga and Schenect'y.	300,000	109,000
Syracuse & Binghampt'n.	768,369	1,578,804
Saratoga & Whhitehall	500,000	395,000
Sixth Av., N. Y	750,000	4,491
Second do	357,600	370,141
Troy and Boston	437,830	733,079
Troy and Bennington	74,100	173,515
Troy and Greenbush	*274,400	*385,000
Third Av., N Y	1,170,000	40,000
Watertown and Rome	1,371,263	800,979
Totals	$69,141,544	$78,125,820

Name of Corporation.	Gross Receipts.	Gross Expenses.
Albany Northern	....	....
Troy and Rutland	$16,000	....
Albany & W. Stockb'ge	323,318	219,991
Blossburg and Corning	38,182	6,303
Black River & Utica	26,261	12,401
Buff. & N. Y. City	288,392	256,496
Buff. & State Line	679,750	323,987
Buff., Corn., & N. Y	42,048	19.256
Roch. & Gen. Valley	167,522	106,143
Brooklyn City	...	....
Canan. & Ni. Falls	322 116	277,501
Canan. & Elmira	299,178	104,583
Chemung	88,162	70,839
Cayuga and Susquehanna	135,433	86,784
Eighth Av., N. Y	215,583	132,592
Flushing	39,753	38,902
Hudson River	1,870,804	1,208,141
Hudson and Boston	44,873	34,647
Long Island, Hicksville,& Cold Spring Branch	329,974	185,331
New York Central	6,563,581	3,401,455
New York and Erie	5,429,489	2,680,327
New York and Harlem	1,191,069	301,451
New York & N. Haven	936,025	594,358
Northern (Ogdensburg)	501,517	369,798
Oswego and Syracuse	145,893	67,558
Pottsdam and Watertown.	26,385	26,385
Rensselaer & Saratoga	242,591	128,398
Saratoga and Schenec	30,150	2,282
Syracuse and Bing	158,632	136,981
Saratoga and Whitehall	71,909	49,823
Sixth Av., N. Y	212,455	165,234
Second do	174,883	62,628
Troy and Boston	156,363	101,198
Troy and Bennington	15,846	.....
Troy and Greensburg	85,023	81,664
Third Av. N. Y	292,475	112,821
Watertown and Rome	401,043	231,899
Total	$21,562,697	$12,098,178

* These figures have been obtained from other reports made to the State Engineer.

History and Properties of Aluminium.

A fine bar of aluminium is now on view at the Polytechnic Institution, where Mr. Pepper explains its history and properties. This metal was discovered by Sir H. Davy in 1808. Oersted endeavored to exhibit the metal in a detached form, by the employment of chloride of aluminium, and about thirty years ,ago Wohler succeeded in obtaining a few grains of it. It has been reserved, however, for M. St. Clair Deville to produce (in the private laboratory of the Emperor of France) a whole bar of aluminium,which has been presented to Mr. Pepper by the Emperor. After giving a brief history of the metal, the non-success of experiments for obtaining it, and the "sodium" and "voltaic battery" processes, Mr. Pepper describes its nature and properties. "Aluminium" is classed by M. Deville as an "unalterable" metal, intermediate between the precious and the more common metals. Mr. Fownes includes it in the same category as glucinum, yttrium, cerium, lanthanium, didymium, zirconium, and thorinum—all of them "metals of the earth proper." The specific gravity of aluminium is 2.56 (or 2.60 according to Mr. Fownes, water being taken as unity). This is about one-eighth of the gravity of platinum, and one-third that of iron, platinum being 20.98; gold, 19.26; mercury, 13.57; silver, 10.47; iron, 7.79; zinc, 6.5; and titanium, (next above alminium), 5.30. The equivalent of aluminium is 13.69. The metal is beautifully white, with a slight blueish tinge, and reflects light clearly. It is malleable and ductile, almost without limit; when passed through the fingers it exhales a slight odor of iron. It is a perfect conductor of electricity,—the best known among the metals,—and is negative to zinc. It melts at a rather higher temperature than zinc, and is excessively fusible. The chemical properties of aluminium are invaluable. It resists oxygen,—water has no action upon it at any temperature,—and even sulphuretted hydrogen—that great defacer of the brightness of metals in large towns,—exercises no destructive influence upon it. It is now, moreover, ascertained that the metal does not decompose water. This aluminium bids fair to become one of the most useful and serviceable of the metals, and from it have already been manufactured some medals and watchwheels of exquisite workmanship.—*London Athenæum.*

Simple Mode of Cutting Stone.

Among the French machinery will be found a very ingenious and simple mode of cutting stone, exhibited by a man named Chevaliere. He causes a wire to run at a high velocity over the surface which he wishes to bisect, and by dropping on it a mixture of sand and water, the operation is rapidly completed. The hardest granites yield so quickly to this process, that the inventor can, with one-horse power, separate it at the rate of a square foot per hour, the wire running at the rate of 40 feet per second. Using the ordinary saw, the amount of work would require three-horse power. and would expend 15 francs worth of material, instead of one franc, which is all that the wire costs.—*London Mining Journal.*

State Treasurer's Report.

According to the report of the Treasurer of New York, for the fiscal year ending Nov. 30th, 1855, there was a balance on hand, at that date, of $516,623 13. The demands upo n the Treasury have all been promptly met. During the year, the following amounts on the various classes of bonds specified have been paid:

General Fund Bonds	$21,000
Internal Improvement Bonds	13,140
Adjusted Bonds	24,394
	$58,534

The present indebtedness of the State is as follows:

General Fund Bonds due	May 1st,	1856.	$79,000
Pontiac Railroad	" July 1st,	1858.	97,000
University	" " "		99,000
Penitentiary	" Jan. 1st,	1859.	20,000
"	" "	1860.	40,000
Full p'd 5 million loan due	"	1863.	177,000
Adjusted	" "	1863.	1,655,235
Internal Improvement bonds, due on demand			4,950
Unrecognized, (part paid) now outstanding, $364,000, value of which Jan. 1st, 1856			213,128
These fall due Jan. 1st, 1856.			
Internal Improvement Warrants			4,645
			$2,389,958

The last Legislature passed an act, approved on Feb 12th, 1855, requiring the holders of that class of bonds known as the *"part paid or unrecognized five million loan bonds,"* to surrender the same for adjustment within six months from the passage of said act; and in case of failure to present such bonds within the time prescribed, interest thereon was to cease.

In accordance with this act, there was due notice given, and $2,319,000 bonds of this class have been already surrendered, leaving $364,000 outstanding. The rate at which these bonds are now adjusted, with the interest thereon, is $505 51 for each $1,000. The surrender of these is regarded as a matter of much interest to the people of the State.

The interest on the public debt, as now adjusted, will be $143,397 48, payable semi-annually in in the city of New York.

Victoria Bridge.

From the interest felt by the Engineering profession in reference to this great work, we give this week the report of the Engineer in charge, Alexander Ross, Esq., addressed to Mr. Stevenson, whose report we have already given.

MONTREAL, Nov. 30, 1855.

MY DEAR SIR:—

Your favor of 2d instant, in reference to the Victoria Bridge, I have received; and, in reply, I have to observe, that the question of economy in the masonry is one which, in every point of view, had received from me the most mature consideration that my acquaintance with the subject, and the peculiarities incident to this locality pointed out as necessary; and I shall endeavor to make clear to you, as shortly as I can, how far my opinions upon this subject are verified by the experience we have already had, both as regards the form and character of the design for efficiently answering its purposes, as well as the disposition of its leading features [*stone* and *iron*] with the view to the utmost practicable economy.

The various parts referred to in your letter, I shall take up in the order in which they occur.—First, the abutments. These, it appears, are considered unnecessarily large, and more costly than the tubes, and it is suggested that they may be reduced by making openings in, or by shortening them. These abutments are not in reality what upon paper, they appear to be, a solid mass of masonry; *they are hollow*—each having eight openings or cells, 48 feet in length, and 24 feet in width, separated by cross walls five feet in thickness. The flank wall on the down stream side rising nearly perpendicular, is seven feet in thickness, and that on the up stream side is sloping from its foundations upwards to an angle of 45°; its thickness is 12 feet, and presents a smooth surface to facilitate the operations of the ice, on which account its form has thus been determined; and to ensure greater resistance to the pressure of the ice, the cells are filled up with earth, stone, and gravel, so that one solid mass is thus obtained at a moderate cost. The subjoined plan and section of this work will better explain its form and proportions.

The idea of introducing any other description into the abutments than those described, is altogether inadmissable; passages through it where ice could accumulate, would ensure its inevitable destruction upon the first hydraulic pressure it had to encounter.

I have observed in this immediate neighborhood the effects of swift currents created by obstructions in the river on a recently formed causeway constructed of timber connecting a small island below the bridge with the shore, having openings about twelve feet in width at intervals of about thirty feet.

In the autumn of last year the openings were partly covered by heavy timber and planking strongly secured by iron work, and the consequence has been, that during last winter, the first crush of the ice, in forcing its passage through, destroyed every timber, plank, and bolt, that opposed it. Having got under, it was immediately blocked up, and the pressure of water still forcing its way, the jam became at length so tight, that it burst with an explosion.

It is stated that the length of the abutments is unnecessary and greatly in excess. Upon paper this may seem so, and a recollection of the idea conveyed to my own mind subsequent to the earlier considerations of this subject, which led me to the conclusion of adopting their dimensions, prevents my attaching much importance to such a view as I otherwise might do. You will recollect that the bridge is approached from the north shore by an embankment 1,200 feet, and from the south shore 800 feet in length, the river being thereby narrowed to this extent; the waters thus far embayed, have now to find their way through the bridge, and the current overcharged with ice, sweeping its way along the front of the embankment into the nearest passage attains ere reaching it, a velocity which nothing but the most substantial masonry should resist. This, it will be seen, bears on the question of the length to which such masonry should extend, and I am more than ever convinced that I have not exceeded the limits which prudence dictates; thus confirming my original view in reference to this particular and very important point. I think you will readily admit that I have given ample reasons in justification of the extent of the abutments, bearing in mind that the form of *construction* contributes more to their apparent magnitude than a cursory glance at their appearance upon paper would justify one in supposing; and as to their cost, it is not to be supposed that the large and costly preparations made in machinery and other appliances for carrying on these works, could in fairness be allowed to remain altogether unaccounted for until redeemed by the slow progress of each succeeding pier.—You will remember the consideration given to this subject at the time the contract details were under discussion, and I believe the most equitable adjustment was then arrived at for the mutual protection of both parties to the contract.

The two abutments have been proceeded with, and both have had their foundations (the most expensive parts) completed. The northern abutment, commenced last year, is finished to the level of 8 feet above summer-water level, and its extreme end for about 60 feet in length is raised to the height of 20 feet above that level, forming a slope to the embanked approach, which is (throughout its extreme length of 1,200 feet) brought up to nearly the same level, and secured, I hope for all time.

The south abutment is also finished to the height of three feet above summer-water level, and secured for the winter, This abutment would have been nearly completed this summer but for the unexpected depth of deposit, gravel, sand, and large boulders we had to clear out before reaching the rock, amounting to 8 feet in depth, more than we anticipated or had any reason to expect from our previous examinations and soundings.—Next summer will enable us to finish this part of the structure, all the stone for which is prepared and now upon the adjoining land, covering several acres to the extent of three and four blocks in depth.

Next as to the piers:—It is alleged that their depth is far greater than necessary; this, it appears, is on the assumption that they are 39 feet deep in the shaft. A reference to the accompanying diagram of pier No. 5 disproves this statement; the depth, you will perceive, is only 33 feet. The tube requires a bearing surface of 21 feet, we have therefore only six feet on either side; the idea of any reduction, therefore, at once falls to the ground; and even if such were admissable, your estimate of the value of such reduction is erroneous. This you will at once see when you consider, that placing the first foundation stone in any one of these piers requires an outlay of from 55 to 60 per cent of the total cost of each pier; there is, therefore, only about two shillings and six pence a cubic foot left for the remainder, and if any reduction had to be made, this rate would determine its just value.

It is true that in the arrangements for payments on account, a uniform distribution of the cost of each completed pier has reference to the masonry alone—a reasonable distinction being made between that above and below water level, the latter being paid for at a rate allowing of some remuneration for the previous outlay, at the same time reserving for that above such level a sufficiently ample allowance to ensure its completion.

The two large centre piers being alluded to, I would merely remark in reference to these, that they were designed as distinctive objects marking the navigable channel, that no reasonable ground for complaint on this account could be alleged; their ample dimensions also serve as a necessary protection against accidents incident to every navigation where it is possible to run against any obstruction existing within reach of reckless and unguarded steering. Although these reasons cannot be altogether overlooked, it has long since occurred to me that in breadth they might be diminished about 25 per cent., and such diminution I had in contemplation, provided any future observation in reference to the ice did not deter me from such a course. In regard to this I have further to observe, that these piers are in deep water where the ice does not ground, and where the pressure in consequence requires greater power of resistance; any diminution in these piers which I might according to my own views of the case be induced to adopt, I should treat as some compensation, as far as it went, for the increased depth of the foundations generally, which are found greatly to exceed our anticipations; although every pains had been taken to ascertain what these would be, we find in the progress of the works that the bed of the river in most parts is formed of large boulders heaped together in large masses, the interstices being filled up with gravel, sand and mud, in many instances forming a hard concreted mass, and in others the reverse; beds of quicksand and mud being as frequent as any other. Three thousand tons of such material we had to clear out of the foundation of No. 5 pier, as you will see indicated on the diagram already referred to, below the level at which our previous examination would lead us to expect the foundation we sought. One of the boulders taken out, by admeasurement, would weigh about 11 tons; masses of 3 and 4 tons are strewed as thickly as pebbles on the seashore. The shallows in the river are evidently formed by these deposits, and I have no doubt in every instance where these shallows appear, we shall have to encounter similar difficulties. In pier No. 3, we found a depth of four feet at one end, and nine feet at the other, to clear out ere we reached the rock. These unlooked-for contingents have materially retarded our season's operations, otherwise we would by this time have Nos. 3, 5, and 6 nearly completed, as it turns out we require another season to accomplish this. And here I think it well to observe that up to No. 6 inclusive, the expensive outlays have already been incurred; the dams have been completed; and in all except No. 4, the water has been pumped out and the machinery erected for setting the stone, but No. 5 is the only one where we have been able to complete any masonry, owing to the unlooked-for causes I have already described. These contingents render it impossible to complete one pier in less than two seasons, though, as in the case of No. 1 pier, where no such unlooked-for difficulty arose, the whole was begun and completely finished in one season, thus saving the removal and re-erection of all the machinery and appliances necessary, besides the reparation of such damages as the winter operations may produce.

With regard to the ice-breakers, which is the next question referred to, the comparative cost between the detached or ordinary ice-breakers and those attached to the piers in the present design, this question is easily disposed of. You will remem-

ber three years ago, when considering the mode of construction to be adopted, that in every point of view the plan of detached ice-breakers was found to be so far deficient in merit, both as to cost and efficiency, as to lead at once to its total abandonment. I shall endeavor in as few words as I can to recall to your recollection the reasons which led to this conclusion.

I was fully informed at the time of the mode described in the report you refer to, which contemplated the planting of very large cribs covering an area of one quarter of an acre each, and leaving a blear passage between them of 240 feet; these islands (as they are called) of timber and stone were designed to have a rectangular well left open in their middle, out of which would rise the solid masonry towers supporting the weight of the superstructure. This inclosure of solid crib work was intended to surround the masonry, yet detached from it, and rnceive the shock and grinding of the ice, yielding to a certain extent by its elasticity, without communicating the shock to the masonry, and if damaged could be replaced with facility; they were designated also to reach the height of 30 feet above summer water level, this being necessary on account of the great height which the ice generally attains; the up stream face was intended to be sloped,—one of the primary requisites essential to the effectual performance of its duties.—This mode of construction you will readily perceive, comprehends very formidable dimensions, and it is only partially true as stated, that it could be made available in serving as a coffer-dam for getting in the foundations of the masonry. The usual precautionary measures of clay puddle would still be necessary to block out the water, and having already given you a description of the nature of the foundations we have to deal with, I need not now recount the difficulties which, under such circumstances, would present themselves.

You will also perceive that these quarter acre islands would occupy 25 per cent. of the water breadth of the river, one of the most prominent reasons for their abandonment when first considered.

The space occupied by the piers as *being executed* is only *seven per cent.*; this is a most important feature in the relative merits of the two modes of construction. Our present dams are generally about 5 or 6 feet above summer water, level, and cover an area corresponding nearly with that described; latterly we have constructed them similar to these, filling the external barrier with stone and the inner with clay, necessary to render them water tight; the force of the current is necessarily increased, and the natural consequence owing to the fragile nature of the deposits forming the bed of the river, is to undermine rapidly the part exposed to the action of the waters, thus rendering them more insecure every day, and requiring an immense amount of expensive labor for their protection. I mention these facts which our experience has brought to light, as an additional reason why we should not resort to such an objectionable mode of construction. As to their cost, assuming the existing dams to serve the purpose as far as they go, we should have to raise them to the height of 25 feet above their present level, and to add as much to their length up stream as the necessary slope at that end would require.

These ponderous erections would measure about 350 feet in circumference, and from their foundations to the top would measure 40 feet,—25 feet above the present dams. The wall thus formed of timber and stone, would be about 20 feet in thickness, the cubic contents of this mass above the level of the present dams would be 200,000 feet, and the masonry saved thereby would be exactly 20,000 feet, which is all that is required to form the stone cutwater or ice-breaker, attached to the piers. I believe no man capable of instituting a comparison, and with *these facts before him*, will for one moment hesitate in giving the preference to the attached ice-breakers as now being executed; their more permanent efficiency, founded in every instance upon the solid rock, placed beyond the reach of any influence exerted by the currents, and their incomparable pre-eminence in relation to the space they occupy, together with their immunity from accidents (not requiring repairs of any kind,) a light in which the other mode can never be regarded; and, lastly, although not least, their evident economy in the first cost, places them immeasurably in the scale of merit beyond the temporary mode suggested as the substitute, on grounds which I think I have made clear are altogether untenable.

I believe I have now gone through the various points referred to in your letter to which you called my particular attention, and I hope my explanations of the existing state of our operations will satisfy you that we have pursued the right course in the designing and prosecution of this work.

The only observation I would desire to add, would be in reference to the reasons which led to the adoption of 242 feet as the span best suited in point of economy to fill up the space we had to deal with, although the masonry bears a larger proportion to the entire cost than a due regard to economy would appear to warrant, we find that to diminish the number of piers by one only, on each side of the centre span, would in this item save 9 per cent., which would add 20 per cent. to the cost of the superstructure, as the proportion due to the sectional area of the tubes by this increase which would amount to about £80,000.

The centre span is of course an exception, the reasons which determined this were local both as to height and width, and could not be departed from.

You will bear in mind that a clear height of 60 feet is required at the navigable channel, a descent of one in 132 brings us to 36 feet above such level at the abutments. The ice in Dec., last year, rose to within eight feet of this point, as you will see indicated on the diagram of No. 5 pier, and some hours before it reached this point it made a clear sweep of all our dams and temporary works surrounding the pier and abutments, although filled with stone and protected in all possible ways by sloped fronts on the up stream side. In many statements which have been put forward, great stress has been laid upon the fact of some one or two experimental crib ice-breakers fixed some short distance above the site of the bridge, withstanding the shock of several winters operations; I have seen these, and have observed the cause of their standing the test, to be entirely owing to the fact of their being only some two or three feet above low water level, and in shallow water, so that as soon as the waters rise they are covered over, and so completely loaded with the accumulating masses of ice, that they are firmly held in their places; their insignificance alone saving them from destruction; time however has swept *even these* away, and they are nowhere to be found.

In conclusion, I feel it may duty to state, that, if after having duly considered the subject, you still think a saving can be effected in any part of the masonry beyond what I have pointed out as possible in the centre piers, I shall make it my aim to carry it out to the fullest extent practicable. I am, dear sir,

Yours sincerely,

ALEXANDER ROSS.

R. Stephenson, Esq., M. P.

Indianapolis and Cincinnati Railroad.

The total earnings of this road for 1855, have been as follows:

	1854.	1855.		1854.	1855.
Jan..	$12,855	$29,497	July..	$16,649	$24,323
Feb ..	21,598	24,210	Aug..	26,566	35,926
Mar..	27,202	32,275	Sept .	31,449	40,206
April.	19,438	31,193	Oct...	33,946	47,855
May.	17,372	30,895	Nov ..	37,963	45,191
June.	21,401	28,375	Dec ..	32,494	48,652
Total				$299,433	$418,663
					299,433
Increase					$119,230

—or 40 per cent.

The company have declared a *cash* dividend of four per cent. for the earnings of the past six months. The result for the past six months give good reason to expect that the ratio of increase in earnings for the present year, will be fully as great as for the past.

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28th January, 1856. 4t5

NOTICE TO

Railroad Contractors.

Memphis, Clarksville, and Louisville Railroad.

THE Board of the above Company invite bids for the construction of their road from the Kentucky State Line to the Cumberland river at Clarksville.

This road will intersect, at the Kentucky Line, the Branch of the Louisville and Nashville Railroad from Bowling Green, Ky., and the Memphis and Ohio road at the Tennessee river. Other sections as well as the building of the bridge across the Cumberland river will be let hereafter.

Maps, profiles, and plans can be seen at the office of the Company in CLARKSVILLE, or inquiries made of the undersigned.

W. B. MUNFORD, Pres't M., C., & L. R. R.
CLARKSVILLE, Tenn., Jan'y 16th, 1856. 6t4

LOCOMOTIVE ENGINES
FOR SALE.

THE PROVIDENCE & WORCESTER R. R. CO. offer for sale TWO LOCOMOTIVE ENGINES, in good order and in daily use. Weight of Engines twenty tons each, with 14 by 18 inch cylinders. Drivers five feet diameter. For further particulars inquire of the undersigned, at PROVIDENCE.

JOHN B. WINSLOW, *Superintendent.*
PROVIDENCE, Jan'y 10th, 1856, 2m4

RAILROAD IRON.
Winterhoff, Piper & Co.,
82 BROAD STREET,

OFFER FOR SALE, VIZ:

1,000 TONS Guest & Co., 50 lbs., to arrive from London in New York.
500 TONS Guest & Co, 58 lbs., Erie pattern, per ship Euxine now on the voyage from Bristol to New Orleans.. 1m3

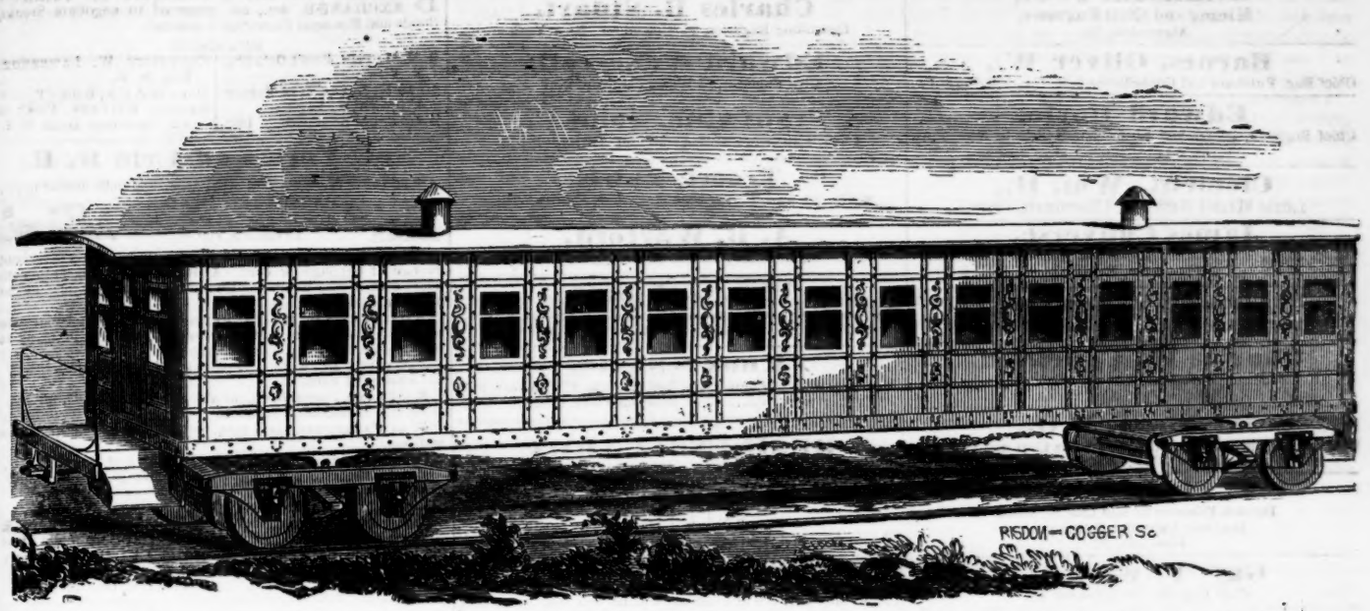
Second Hand Locomotive
FOR SALE VERY LOW.

Weight 13½ tons.—4 ft. 8½ in. Gauge.—11½ in. Cylinder.—16 in. Stroke.—4 ft. Drivers.—New Tender on 6 wheels.—Engine in perfect repair.

The above will be found a very serviceable engine for gravelling, switching, lumber and coal trains, and contractors' use, and can be had on excellent terms on application to

tf ELLIOTT & CO.,
4 William st., N.Y.

LA MOTHE'S PATENT IRON RAILROAD CAR.



WE are now prepared to furnish this Car to railroad companies at short notice and reasonable rates.

Notwithstanding its extraordinary advantages, the prices will be arranged wholly with reference to the cost of construction—without regard to patent rights.

We are now building passenger and freight cars for several companies; and it is desirable that parties ordering give early notice of their wants.

The striking features of this principle are:—simplicity—cheapness—durability—superior safety in cases of accident—facility of repairing when damaged—and less weight compared with the wooden cars of the same capacity; these cars for 60 passengers are more than two tons lighter than the ordinary cars, while the strength is immeasurably greater.

We guarantee these points in the acceptance of orders.

The advantages may be tested by personal observation in this city. Detailed descriptions of the cars will be forwarded to parties wishing them.

ALFRED SEARS,
Civil Engineer and Architect,
Agent.
OFFICE—9 SPRUCE ST., NEW YORK.

ENGINEERING.

THE undersigned is prepared to furnish Specifications, Estimates and Plans, in general or detail, of Steamships, Steamboats, Propellers, High and Low Pressure Engines, Boilers, Mill Work, etc., etc. Particular attention given to the procuring and superintending of Locomotives, Tenders, Cars, and Railway Machinery of every description.

General Agent Ashcroft's Steam Gauge, Allen & Noyes' Metallic Self-adjusting Conical Packing, Dudgeon's Hydraulic Jack, Sewall's Salinometers, etc., etc., etc.

Acts as Agent for the purchase or sale of, and has always on hand, Steamers, Locomotives, Engines, Boilers, Machinery, etc

CHAS. W. COPELAND,
Consulting Engineer,
1y17 64 Broadway, N. Y.

Railroad Iron.

1,000 TONS Welsh Rails, 60 lbs. to the yard, now in bond and for sale by
45tf CLARK & JESUP, 70 Beaver st., N. Y.

EDDY'S
Patent Car Locomotive and Tender Wheels.

GEORGE W. EDDY of Waterford, New York, is prepared to execute orders to any extent for his well known and fully tested double plate and solid Hub Wheels, fitted to axles as required. Wheels of this pattern have been in general use for eight (8) years by the various railroad companies through out the United States and Canada as well as on many roads in Great Britain. In the manufacture of these wheels they undergo *no annealing process* which gives them a deeper and hard chill than those of any other manufacture.

W. F. SHATTUCK, G'l Agent, 229 Broadway, N. Y.

Railroad Iron.

225 TONS Welsh Iron, 56 lbs. to the yard, in store and to arrive. For sale by
45tf CLARK & JESUP, 70 Beaver st, N. Y.

Railroad Iron.--Locomotives.

6,000 Tons Rails, 58 to 61 lbs. per yard.
1,000 " " 55 " " "
200 " " 49 " " "

Several LOCOMOTIVES of best manufacture, adapted to a variety of gauges, on hand and for sale by

H. H. GOODMAN & CO.,
No. 7 Wall st.,
2m1 New York.

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE
SOUTH AND WEST.

Trains will leave the Southern and Western Station, corner of Broad and Prime streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington			$15 50
do	do	Norfolk	8 50
From Philadelphia to Wilmington			14 00
do	do	Norfolk	6 50
do	do	Petersburg	9 00
do	do	Richmond	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati			$13 50
do	do	Louisville	14 50
From Philadelphia to Cincinnati			11 00
do	do	Louisville	12 00
From New York to Indianapolis			16 00

An extra charge will be made for meals and state rooms on board the boat. GEORGE A. PARKER, *Sup't.*

ENGINEER'S FIELD BOOK

By C. S. CROSS, *Civil Engineer.*

THIS work is designed as a pocket companion, and embraces all the necessary tables for prosecuting railroad surveys, in the most compact form.

It is subdivided as follows:

1st. The method of staking out railroad curves and keeping field notes.
2d. Railroad curve tables for expeditiously determining the points at which commences the curving.
3d. Application of the Prismoidal formula in determining the quantities of excavation and embankment of canals and railroads from transverse sections.
4th. Excavation and embankment tables for expeditiously determining the cubic yards from mean area.

It is a plain, clear and most valuable book for practical Railroad Engineers.

For sale at this office. Price $1.

CONTRACTOR'S OFFICE MINERAL POINT RAILROAD, }
No. 31 Pine street, New York. }

Railroad Iron Wanted.

THE subscriber desires to purchase twelve hundred tons of T rails, Erie pattern, 56 lbs. to the yard, for which proposals are invited.

3tf A. WILKINS.

ELLIOTT & CO.,
NO. 4 WILLIAM STREET, NEW YORK.
(ONE DOOR SOUTH OF BEAVER STREET.)
RAILROAD AGENTS
AND
COMMISSION MERCHANTS,
PURCHASE AND SELL ON COMMISSION
FOR RAILROAD COMPANIES.

RAILROAD IRON—They contract upon the most favorable terms for the delivery of Rails either on board ship in England or in the United States.

LOCOMOTIVES & CARS.—Having connection with some of the best builders, they furnish the best at the lowest rates for cash or good paper.

WHEELS & AXLES.—They are Agents for two of the best Forges, and one of the first Wheel Makers, and can supply orders with promptness and to give satisfaction.

CHAIRS & SPIKES.—They are authorised to sell wrought and cast iron chairs and spikes from the best known makers at the lowest rates.

All orders will be promptly filled and at the lowest market prices.

CAR FINDINGS in variety.

☞ **Railroad Secretaries are particularly requested to forward by mail copies of their Reports from the first**

ELLIOTT & CO.,
No. 4 William st., N. Y.

TORONTO & OSWEGO
STEAMBOAT LINE.
Alteration of Hours.

THE trains on the OSWEGO & SYRACUSE RAILROAD having changed their hours of departure, in connection with the Railroads to New York, these steamers will, in future leave Toronto as follows:

"CHAMPION" Sunday, Tuesday, and Thursday, at 5 P. M. punctually.
"MAYFLOWER" Monday, Wednesday, and Friday, at 5 P. M. punctually.

☞ Passengers by these boats may depend on making connection with the Train arriving in New York on the ensuing evening, thus making the most agreeable and expeditious route to that city, and avoiding all night travel on railroads.

TORONTO, Sept. 21st, 1855. 41tf

ENGINEERS.

Atkinson, T. C.,
Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,
Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

James Converse,
Chief Engineer Galveston, Houston & Henderson Railroad,
Galveston, Texas.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M.O.,
Civil and Mining Engineer. Office Swanton Coal and Iron Co.,
51 *Exchange Place*, BALTIMORE, Md.

C. Floyd-Jones.,
Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD.
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N.Y.

Gzowski, Mr.,
St. Lawrence and Atlantic Railroad, Toronto, Canada.

Grant, James H.,
Nashville and Chattanooga R. R., Nashville, Tenn.

Theodore D. Judah,
Chief Engineer, Sacramento Valley Railroad,
Sacramento, Cal. 1y23

Robert B. Gorsuch,
Civil and Mechanical, Steam and Hydraulic Engineer,
Tabernacle Building, 340 Broadway, N.York. 18tf

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

D. Mitchell, Jr.,
Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley
Railroads, Pittsburg, Pa.

Samuel McElroy,
Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Septimus Norris,
Civil and Mechanical Engineer, Philadelphia.

Saml. & G. H. Nott,
Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
Civil Engineer, Office 73 South 4th st., Philadelphia.

Prichard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburgh, Pa.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Charles L. Schlatter,
Chief Engineer Brunswick and Florida Railroad,
Brunswick, Georgia.

Straughan, J. R.,
Ohio and Indiana Railroad, Fort Wayne, Ind.

Shanly, Walter,
Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Steele, J. Dutton,
Pottstown, Pa.

Charles B. Stuart,
Consulting Engineer, 23 William str., New York.

Edward W. Serrell,
Civil Engineer, 23 William st. New York.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
Chief Engineer, Susquehanna Railroad, Harrisburg, Pa.

Wm. J. Young
HAS removed his Engineering and Surveying Instrument Manufactory to No. 33. North Seventh Street, Philadelphia.

Knox & Shain,
Manufacturers of Engineering Instruments, 46½ Walnut st.,
Philadelphia. (*Two premiums awarded.*)

BUSINESS CARDS.

Railroad Suspension Bridge.
NOTICE.

BENJAMIN WATKINS, at Port Gibson, Mississippi, Architect and Engineer, will erect Suspension Wire Cable Bridges for railroad crossings from two hundred to three thousand feet span, and wooden bridges of three hundred feet span for any purpose of crossing, and he will also erect foot bridges for man and horse crossing with short or long spans in any part of the United States upon fair terms. Please address as above.
November 12th, 1855.

The Troy Iron Bridge Co.

ARE prepared to erect Iron Bridges or Roofs, or any kind of bearing trusses, girders, or beams, to span one thousand feet or under, of any required strength, in any part of the country. Their bridges will be subjected to severe tests, and can be built for about the price of good wooden ones. Address
D. & G. L. BLANCHARD, Troy, N. Y.
April 1st, 1855.

W. G. ATKINSON,
CIVIL ENGINEER, SURVEYOR AND DRAFTSMAN,
CUMBERLAND, Maryland.

RAILROAD routes located, planned and estimated. Maps and Reports furnished. Researches made for Coal, Iron, Copper, Lead and other Minerals, Metals, &c. Contract work in Tunnels and heavy Graduation measured and reported in detail. Topographical Drawings executed and Lithographs supplied by skilful artists. Mines explored, new Works laid off, and Geological Plans prepared. 8tf

H. SAWYER
(of the late firm of SAWYER & HOBBY),
Manufacturer of Transits and Levels,
HAS removed to Union Place near Warburton Av., Yonkers. N. Y.

Lord & Wright,
Counsellors at Law Cincinnati, Ohio. 16t

J. S. Sewall,
CIVIL ENGINEER,
ST. PAUL MINESOTA.

Rollins & Haviland,
STOCK BROKERS,
38 Exchange Place NEW YORK.
JOHN T. ROLLINS. WALTER HAVILAND.

INCRUSTATION
OF BOILERS.
WEISSENBORN'S PATENT
Incrustation Preventor

effectually obviates incrustation by separating the incrusting matter from the water befor it enters the boiler, while at the same time it is of great value as a HEATER and CONDENSOR.
The apparatus occupies but little space, is simple in construction and management, and applicable alike to stationary, locomotive and marine engines.
Testimony can be furnished of its successful operation for several months during which it has been in use here, and for two years in Europe, with water containing an unusual proportion of lime.
Drawings and full descriptions will be furnished to parties desiring them. For right to use this invention, apply to
E. W. SARGENT Delmonico's Hotel,
No. 25 Broadway, NEW YORK.

ELLERY & GIBBONS,
No. 10 WALL ST.,

BANKERS, DEALERS in DOMESTIC and FOREIGN EXCHANGE, &c., are prepared to negotiate Stocks, Bonds and Financial Securities in general.

REFERENCES.

D. R. MARTIN, Pres't Oc'n B'k, N. Y.
SILAS K. EVERETT, of Everett & Brown, N. Y.
WELLS, FARGO & Co. 18tf
CORNELIUS W. LAWRENCE, Esq., N. Y.
DREXEL & Co., Bank's, Philad
SAMUEL WILLETS, Pres't of Am. Exchange Bank, N. Y.

New York and Erie R. R.

On and after *Monday, Dec. 31st*, 1855, and until further notice
PASSENGER TRAINS
will leave Pier foot of Duane street, as follows, viz:—

BUFFALO EXPRESS, at 7 a.m., for Buffalo direct, without change of baggage or cars. At Hornellsville this Train connects with a Way Train for Dunkirk and all stations on the Western Division.
MAIL, at 8¼ a.m. for Dunkirk and Buffalo, and intermediate stations.—Passengers by this train will remain over night at Owego, and proceed the next morning.
NEWBURGH EXPRESS, at 4 p.m., for Newburgh direct, without change of cars.
ROCKLAND PASSENGER, at 4 p.m., via Suffern's, for Piermont and intermediate stations.
WAY PASSENGER, at 4 p.m., for Otisville and intermediate stations.
NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.
EMIGRANT, at 5 p.m., for Dunkirk and Buffalo and intermediate stations.
On Sundays One Express Train—at 5 .m.
These Express Trains connect at Elmira, with the Elmira & Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati Toledo, Detroit, Chicago, etc.,
1.tf. D. C. McCALLUM, General Sup't.

Lawrence Scientific School,
HARVARD UNIVERSITY.

THE next Term of this Institution will open on the first day of March, 1856, and continue twenty weeks.
Instruction by Recitations, Lectures, and Practical Exercises, according to the nature of the Study, will be given in:

Botany	by	Prof.	Gray.
Chemistry, Analytical and Practical	"	"	Horsford.
Comparative Anatomy and Physiology	"	"	Wyman.
Engineering	"	"	Eustis.
Mathematics	"	"	Pierce
Mineralogy	"	"	Cooke.
Physics	"	"	Lovering.
Zoology and Geology	"	"	Agassiz.

For further information concerning the School, application may be made to Prof. E. N. HORSFORD, Dean of the Faculty.
CAMBRIDGE, Mass., Jan'y, 1856. 6t52

To Engine Drivers and Mechanics.

FIFTEEN to twenty Locomotive Drivers and Mechanics of good character, experience, and steady habits, will find permanent places and liberal compensation on the Mobile and Ohio Railroad at Whistler, five miles from Mobile City.
JOHN CHILDE,
8t2 *Engineer and Sup't.*

Meigs & Greenleaf,
Office No. 23 William st.,

WILL give prompt attention to the purchase and sale of STOCKS, BONDS, &c., strictly on commission. Orders respectfully solicited.
CHAS. A. MEIGS, late Cashier Am. Ex. Bank.
A. W. GREENLEAF, late of No. 2 Wall st.
REFERENCES: American Exchange Bank, Bank of the Republic, Metropolitan Bank, Merchants' Bank. 1y18

To Civil Engineers and Contractors.

JUST PUBLISHED—A set of Tables for finding, at a glance, the true cubical content of Excavation and Embankments for all Bases, and for every variety of Ground and Side Slopes. By M. E. LYONS, Associate Engineer, Lebanon Valley R. R.
The Tables are 24 in number, printed in clear, bold type on sheets of tinted paper, 25x16 inches. Sold in separate sheets, at 25c. each, or the whole handsomely bound in cloth in one volume for $7.50, by JOSEPH HUPTY, 139 Chestnut st., Phila.; WM. MINIFIN, Baltimore, Md.; ENTWISTLE & SON, Alexandria, Va.; McCLEAR & Co., Toronto, C. W., and by all booksellers.
Also for sale at this office. 38tf

Four First Class Locomotive Engines for Sale.

1, Cylinders 15½x22, Drivers 5½ feet,
2, Do. 15 x20, Do. 5 feet,
1, Do. 15½x22, Do. 4½ feet,
all of which have 4 wheels connected with centre bearing trucks; wrought in frames and pedestals; copper flues; lifting link valve motion. H. & F. BLANDY.
ZANESVILLE, Ohio, August 11th, 1855. 33